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# **Seventh Quadrennial Review of Military Compensation**

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## **Annual Pay Adjustment Major Topical Summary (MTS) 5**

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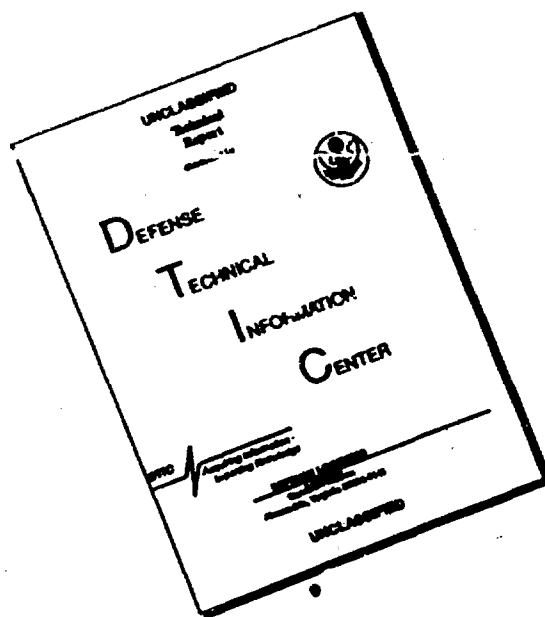
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# ANNUAL PAY ADJUSTMENT

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**Seventh Quadrennial Review of Military Compensation**

**ANNUAL PAY ADJUSTMENT**

**7<sup>th</sup> QRMC Major Topical Summary (MTS) 5**

**August 1992**

*Annual Pay Adjustment*  
*Major Topical Summary (MTS) 5*

A staff paper of the Seventh Quadrennial Review of Military Compensation  
August 1992

Office of the Assistant Secretary of Defense  
(Force Management and Personnel)  
The Pentagon, Room 3E764  
Washington, DC 20301-4000

## **7<sup>TH</sup> QRMC STAFF ANALYSES**

The full set of the 7<sup>th</sup> QRMC study documentation includes this report and the 7<sup>th</sup> QRMC Staff Analyses, which form a series of stand-alone reports. The reports in the Staff Analyses provide detailed facts and logic of interest to the small audience of staff specialists who may require a more complete understanding of the findings and recommendations in our official report.

There are two types of documents in the Staff Analyses: Major Topical Summaries (MTSs) and Global Subject Papers (GSPs). MTSs cover primary areas of investigation, such as basic pay and allowances, while GSPs cover either theoretical considerations, such as the principles of compensation, or special research subjects, such as foreign military compensation systems. All other QRMC staff documents are internal working papers that do not necessarily represent the official views of the QRMC. The Staff Analyses consist of the following documents:

### **MAJOR TOPICAL SUMMARIES (MTSs)**

Compensation Structure .....	MTS 1
Basic Pay .....	MTS 2
Allowances .....	MTS 3
Special and Incentive Pays .....	MTS 4
Annual Pay Adjustment .....	MTS 5
Integration and Transition .....	MTS 6

### **GLOBAL SUBJECT PAPERS (GSPs)**

Foreign Military Compensation Systems Review .....	GSP A
The Target Force .....	GSP B
Modeling, Logic, and Theory .....	GSP C
Tax Issues .....	GSP D
Cost Analysis Methods .....	GSP E
Principles of Military Compensation .....	GSP F
Drawdown .....	GSP G
Service Comments on the Draft Report .....	GSP H

# ANNUAL PAY ADJUSTMENT

## CONTENTS

<b>LIST OF PARTICIPANTS</b> .....	<b>xi</b>
<b>CHAPTER 1—INTRODUCTION</b> .....	<b>1-1</b>
Objective of the Annual Pay Adjustment Process .....	1-1
Key Elements of a Pay Adjustment Process .....	1-2
Civilian Peers .....	1-2
Peer Income Measures .....	1-3
Application of the Raise to Military Pay .....	1-3
Major Topical Summary Outline .....	1-3
<b>CHAPTER 2—RESULTS IN BRIEF</b> .....	<b>2-1</b>
What Are the Future Implications of the Current Linkage Between Federal Civilian and Military Pay Adjustments? .....	2-1
What Is the Most Appropriate Indicator of Civilian Wage Growth? .....	2-2
How Should the Military Pay Adjustment Be Applied to the Elements of RMC? ..	2-3
<b>CHAPTER 3—WHAT ARE THE FUTURE IMPLICATIONS OF THE CURRENT LINKAGE BETWEEN CIVILIAN AND MILITARY PAY ADJUSTMENTS? ....</b>	<b>3-1</b>
Overview .....	3-1
Current Process .....	3-1
The Federal Employees Pay Comparability Act of 1990 .....	3-3
Implications of FEPCA .....	3-4
Alternatives .....	3-5
Findings and Recommendations .....	3-5
<b>CHAPTER 4—WHAT IS THE MOST APPROPRIATE INDICATOR OF CIVILIAN WAGE GROWTH? .....</b>	<b>4-1</b>
Overview .....	4-1
Review of Available Indexes .....	4-1
The Employment Cost Index .....	4-2
What Is the ECI? .....	4-2
Assessment .....	4-3
Defense Employment Cost Index (DECI) .....	4-4
What Is the DECI? .....	4-4
How Does the DECI Differ From the ECI? .....	4-4
Population Differences .....	4-4
Fixed vs. Changing Weights .....	4-4
Construction of the DECI .....	4-6
Data Collection Procedures .....	4-6



Calculating Military Weights to Apply to Civilian Wage Data .....	4-6
Producing the Index .....	4-7
Creating Different Indexes .....	4-7
Additional Applications of the DECI .....	4-7
Assessment .....	4-8
Time Frame .....	4-8
Different Index from GS .....	4-8
Weighting Scheme .....	4-8
Stability .....	4-9
Findings and Recommendations .....	4-10
 <b>CHAPTER 5—HOW SHOULD THE MILITARY PAY ADJUSTMENT BE APPLIED TO THE ELEMENTS OF RMC? .....</b>	 <b>5-1</b>
Overview .....	5-1
Historical Review .....	5-1
1967 to 1974 .....	5-2
1975 to 1980 .....	5-3
1981 to 1991 .....	5-3
1992 .....	5-4
Conclusions .....	5-4
Adjusting the Elements of RMC .....	5-5
Findings and Recommendations .....	5-7
 <b>CHAPTER 6—SPECIAL CIRCUMSTANCES .....</b>	 <b>6-1</b>
Overview .....	6-1
Interim Recommendation .....	6-1
Reduced Pay Raises .....	6-1
 <b>BIBLIOGRAPHY .....</b>	 <b>Bib-1</b>
 <b>APPENDIX A—CURRENT POPULATION SURVEY (CPS) .....</b>	 <b>A-1</b>
 <b>APPENDIX B—EVOLUTION OF MILITARY PAY ADJUSTMENTS .....</b>	 <b>B-1</b>
 <b>APPENDIX C—CALCULATING THE RAISE FOR EACH ELEMENT OF RMC .....</b>	 <b>C-1</b>
 <b>APPENDIX D—LEGISLATIVE PROPOSALS .....</b>	 <b>D-1</b>

## ANNUAL PAY ADJUSTMENT

### FIGURES

Figure 1-1.	Notional Application of Annual Pay Adjustments	1-2
Figure 4-1.	Age and Education Distribution—Military vs. Civilian, FY 1990	4-5
Figure 4-2.	Wage Growth for Different Age and Education Groups	4-6
Figure 4-3.	Pay Growth Since 1982—According to the DECI	4-7
Figure 4-4.	ECI and DECI Annual Rate of Change	4-9
Figure 5-1.	Civilian and Military Average Income Expenditure Patterns	5-5
Figure A-1.	Cumulative Growth—CPSI versus ECI.	A-9

### TABLES

Table 4-1.	Indexes Evaluated in 1982 Study	4-2
Table 4-2.	Weighted Average Wage Computation	4-7
Table 5-1.	Comparison of Military and GS Civilian Pay Raises: 1967-1974	5-3
Table 5-2.	Comparison of Military and GS Civilian Pay Raises: 1975-1980	5-3
Table 5-3.	Comparison of Military and GS Civilian Pay Raises: 1981-1991	5-4
Table A-1.	Comparison of 1983 CPS Aggregate Results with Independent Estimates	A-6
Table B-1.	Index Values and Raises	B-2
Table B-2.	Military Pay Raises	B-6
Table C-1.	Effect of Annual Adjustment on RMC Structure	C-4

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# **ANNUAL PAY ADJUSTMENT**

## **CHAPTER 1—INTRODUCTION**

### **OBJECTIVE OF THE ANNUAL PAY ADJUSTMENT PROCESS**

To keep military pay attractive relative to civilian incomes, periodic adjustment (typically in the form of annual pay raises) is necessary. This clearly was the intent of Congress as noted in the report language accompanying the military pay statute of 1967:

[I]nsure that uniformed services personnel will, in the future, be given increases in the level of their compensation comparable to that enjoyed by their civilian contemporaries (House Report No. 90-787, 1967, 3).

This statute remains in effect today. Although this may seem a straightforward goal, it is in fact a complicated issue with far-reaching implications.

The volunteer military competes directly with the private sector to attract and retain the number of dedicated, skilled, and experienced people necessary to man the force. While the decision to begin or to continue a military career is based on more than pay<sup>1</sup>, it is clear that military pay would be most effective and efficient as a recruitment and retention tool if maintained over time at a level attractive compared with civilian employment opportunities.

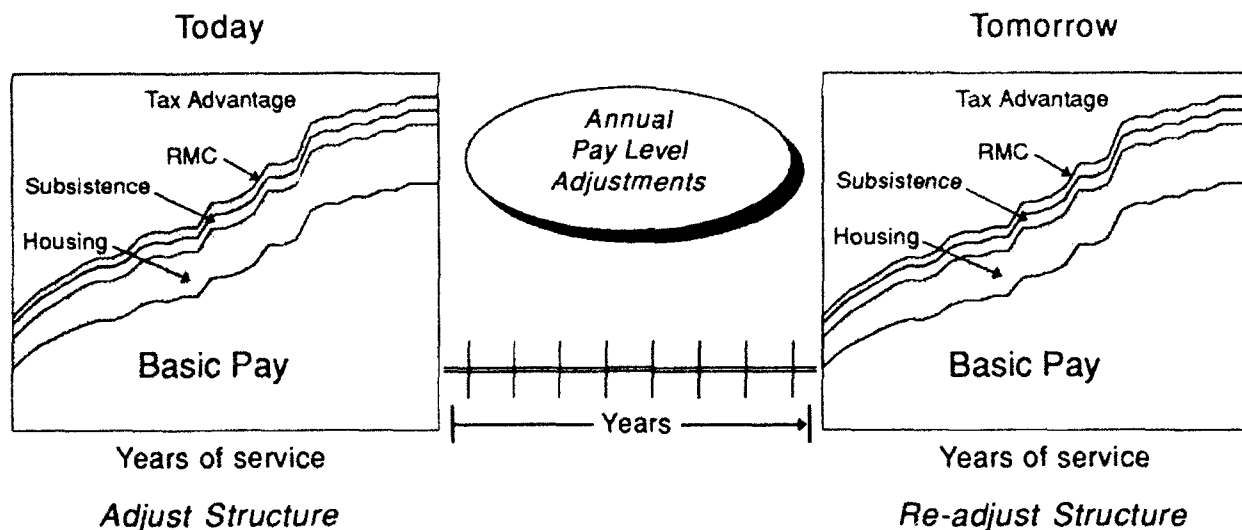
Long-term pay competitiveness mandates annual adjustments comparable to civilian sector wage growth. Failure to make these adjustments means that, over time, military service will become financially relatively undesirable, and the force will suffer as trained, experienced people are lured away from military service to pursue more lucrative alternatives.

An exodus of experienced military members, combined with poor results in the recruiting market, clearly signals that military pay requires adjustment. However, waiting for this form of evidence prior to adjusting pay can be quite costly, in terms of both the budget dollars necessary to recruit and train replacements, and the security risk of reduced readiness.

Given a well-structured starting point, an annual structural review of military pay to determine appropriate levels would be impractical. Thus, this MTS focuses on the annual pay adjustment process (Figure 1-1).

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<sup>1</sup>Other benefits, such as training opportunities, employment security, and preferences for military-specific work and lifestyle enter into an individual's decision.



**Figure 1-1.** Notional Application of Annual Pay Adjustments

#### Key Elements of a Pay Adjustment Process

The key issues in military pay adjustment stem from the objective of maintaining attractive compensation *vis-à-vis* civilian peers. These issues are:

- Who are the civilian peers of the military?
- What is the best measure of civilian peer income growth?
- What is the best way to apply that income growth measure to military compensation?

*Civilian Peers.* Because the uniformed services have two million members working in many diverse fields, *peers* cannot be identified in terms of a small, organizationally defined population. Rather, for the purposes of compensation management one must consider those members of the general population who have the same prospects for earnings that service members would enjoy, were they in private life. Generally, studies of incomes and labor markets have found that the best observable indicators of income are age, education, gender, race, and occupation. Because the armed services do not discriminate in pay by race and gender, the appropriate dimensions for comparing military and civilian pay growth are age, education, and occupation.<sup>2</sup> Compared to the general U.S. work force, the military is a good deal younger, with almost half of its members under 25, and very few members over 50. It also has very few members who did not finish high school, and somewhat fewer members who have completed college. A measure of the income change of civilian peers would look to young high school graduates for the enlisted corps, and fairly young college graduates for the officer corps.

<sup>2</sup>Occupational matches between military and civilian positions are approximate.

*Peer Income Measures.* Measuring the trends in peer incomes is a critical component of the pay management process. One would like a summary indicator—such as an index—for simplicity and ease of use in the annual budgetary process. The measure should be reflective of the experience of military peers, based on the observable criteria of age, education, and occupation. Finally, for a profession marked by a mid-life vocational transition, one would like an indicator that influences lifetime pay to reflect the trend, rather than transitory effects (e.g., the business cycle), and that particularly allows focus on the career segment of the force. Finally, one would like the measure to signal the need for structural review by illustrating changes in the labor market opportunities for different force segments.

No single index now available provides this information. In the public data bases, the Employment Cost Index (ECI) is the best single measure of growth in overall wages, along the trend; it has been named in the Federal Employees Pay Comparability Act of 1990 (FEPCA) as the measure to guide civil service pay management. The ECI is a reasonable near-term measure to guide the annual military pay raise. In the longer term, an alternative measure developed by the 7<sup>th</sup> QRM and the RAND Corporation (RAND), the Defense Employment Cost Index (DECI), shows promise for meeting the full range of measurement objectives: measurement based on peers, stable career force focus, and sensitivity to structural changes. It is based on weighting data from the Current Population Survey (CPS) based on demographic matches between the military and respondents to the CPS. While not yet operationally ready, the DECI merits further development by the Department of Defense (DoD).

*Application of the Raise to Military Pay.* Both formally and in fact, Regular Military Compensation (RMC) is the best single measure of military pay for the purposes of maintaining comparable income growth. In practice, recent pay increases have been directed at and applied in equal proportion to the principal elements of RMC: basic pay, the subsistence allowance, and the basic allowance for quarters (the variable housing allowance has been adjusted separately). This process has contributed to some of the problems already noted in management of the major allowances.

Management of the annual pay raise for the pay and allowances system is best predicated on the nature of that system. Three major points stand out. First, RMC should change apace with growth of civilian peer incomes. Second, the major allowances should be updated annually based on prices of food and housing. Third, basic pay should be increased annually as needed for RMC growth to equal civilian pay growth.

## **MAJOR TOPICAL SUMMARY OUTLINE**

Chapter 2 of this MTS highlights major points in subsequent chapters and summarizes our major findings and recommendations.

Chapter 3 considers the current pay adjustment system, its evolution, and its strengths and weaknesses. In Chapters 4 and 5, we outline an alternative annual pay adjustment process better suited to the circumstances and operation of the pay and allowances system.

Our proposed adjustment process will help insure that military pay remains competitive with private sector pay in the long term, is predictable by the member, and affordable. In particular, our proposal:

- Advances RMC, including variable housing allowance (VHA), as the measure of military compensation to be kept abreast of civilian incomes.
- Recognizes price changes as the appropriate bases for adjusting allowances, while insuring that RMC as a whole grows by measured civilian wage growth.
- Endorses interim use of the ECI to measure civilian wage growth, pending development of a promising, tailored index—the DECI—that estimates pay growth for a civilian population that more closely matches the demographic mix of the services.

The QRMC pay adjustment recommendations are based on two assumptions—implementation of cost-based allowances and full use of an appropriate indicator of civilian wage growth. Chapter 6 discusses alternative recommendations if either assumption is not implemented.

# **ANNUAL PAY ADJUSTMENT**

## **CHAPTER 2—RESULTS IN BRIEF**

The objective of the annual military pay adjustment process is to ensure that military pay grows abreast of wage growth in the civilian sector. The 7<sup>th</sup> QRMC has evaluated the linkage between military and Federal civilian pay raises, validated the most appropriate index for measuring wage growth, and integrated the adjustments of all elements of RMC.

### **WHAT ARE THE FUTURE IMPLICATIONS OF THE CURRENT LINKAGE BETWEEN FEDERAL CIVILIAN AND MILITARY PAY ADJUSTMENTS?**

Since 1967, title 37 of the United States Code has linked the military pay raise to the civil service General Schedule (GS) basic pay raise. The GS pay raise was, in turn, tied to a civilian wage index, although the law did not specify which one. Until 1992, the Professional, Administrative, Technical, Clerical (PATC) survey was the civilian wage measure used as a benchmark for determining the GS basic pay raise. However, in reality, neither the GS nor military pay maintained pace with the PATC survey. Rather, the President, with the concurrence of Congress, established the adjustment amount after comparing civilian and military pay and considering other fiscal priorities.

As noted, FEPCA specifically directed that the GS basic pay raise be based on the ECI. The military linkage remained, so in 1992, GS and military employees received a pay raise equal to the full ECI; and in 1993, both are scheduled to receive another full ECI pay raise.

The FEPCA further states that, beginning in 1994, GS employees will receive a basic pay raise equal to the percentage increase in the ECI minus one-half percentage point (ECI minus one-half), and a locality-based comparability payment for high-wage areas. The combined basic pay raise and locality payment will provide the overall GS population an average pay raise at least equal to ECI. The military, on the other hand, is linked to the GS *basic pay raise alone* and would receive a raise of ECI minus one-half. As a result, military pay, both current and deferred for retirement, would erode over time relative to both private and Federal civilian workers.

The QRMC supports maintaining a linkage between the civil service and military pay raise through the use of the same index, the ECI. However, because the FEPCA-mandated locality payment is unique to civilian Federal workers, the statute governing military pay adjustment must be amended to ensure the military pay raise equals the full ECI.



*The Seventh Quadrennial Review of Military Compensation recommends amending title 37, section 1009, to set the military pay raise equal to full ECI.*

#### **WHAT IS THE MOST APPROPRIATE INDICATOR OF CIVILIAN WAGE GROWTH?**

In 1982, a joint service study group compared the ECI with other available indexes and judged the ECI to be the best measuring tool for comparing military and civilian wage growth. Although not formally adopted, throughout the 1980s the ECI served as a benchmark for comparing military pay raises with the pay growth of the civilian sector.

In 1990, FEPCA mandated use of the ECI in determining annual pay adjustments for Federal civilian workers. Because the military pay raise is linked to the GS basic pay raise by law, the ECI now also determines the annual military pay raise. Therefore, in 1992, both military and GS employees received pay raises equal to *full ECI*; and in 1993, both are scheduled to receive another pay raise equal to *full ECI*.

Concerns have been expressed regarding the appropriateness of the ECI in comparing military and civilian populations. Therefore, the QRMC evaluated a new index, the DECI, designed specifically for potential use in the military pay adjustment process. The DECI was developed by RAND with the direct involvement and assistance of the QRMC staff.

Both the DECI and the ECI rely on civilian wage data. However, in contrast to the ECI, the DECI weights these data based on the current military manpower composition. This system of weighting by age, education level, and occupation category creates an index that focuses on pay changes for civilian peers of the military population.

The QRMC found the DECI to be a promising new index with potential applications beyond the annual pay adjustment process. Because the DECI can generate detailed information regarding service population subcomponents, it could serve as an invaluable personnel management tool in signaling the intermittent need for structural change. It also has potential value as an indicator for bonus program management.

Although the DECI represents an exciting innovation, we do not support adopting it as the primary index for determining the annual military pay raise at this time. With further refinement, this index may very well assume that role. But for now, we recommend that this index be further developed under the policy guidance of DoD. The following specific questions, at a minimum, must be answered:

- Should the annual pay adjustment of the career force be so heavily influenced by the wage growth of the youth population?
- Is it appropriate to tie the military pay raise to an index (DECI) that may be less stable than that used by Federal civilians (ECI)?
- What are the ramifications of legislating different pay raises for military and Federal civilian workers as a result of using separate indexes?

- Because the DECI lags the ECI by about nine months, can we use the monthly CPS to shorten this delay? If so, how would the different data source affect the DECI's results?

*The 7<sup>th</sup> QRMC recommends continuing use of full ECI as the target amount of the annual military pay adjustment. The Office of the Secretary of Defense should underwrite further development of the DECI as a personnel management tool and as a candidate index for future use in the pay adjustment process.*

## **HOW SHOULD THE MILITARY PAY ADJUSTMENT BE APPLIED TO THE ELEMENTS OF RMC?**

The ECI measures changes in private sector wages. To remain competitive with private sector wage growth, military pay should grow at the same rate. But how do we apply wage growth measures to the military pay and allowance system that contains cost-based elements?

Workers in the private sector pay for food and housing from their wages. The ECI measures the change in private wages from one year to the next. It stands to reason that the sum of all the cash elements of RMC, which includes funds for food and housing, should increase at the same rate as the average rate of change of private wages. Indeed, for the last 25 years, both the Congress and the Executive branch have treated RMC (defined as basic pay, housing, and subsistence allowances, either in cash or in kind, and the tax advantage) as the military analog to civilian pay.

It is interesting to note that the expenditure pattern of private wages and the apportionment of military pay are very similar. People in the private sector, on average, spend about 10 percent of their wages for food, 30 percent for housing, and the remaining 60 percent for goods and services. RMC is apportioned, on average, as roughly 10 percent for food, 25 percent for housing, and 65 percent (basic pay) for goods and services.

Currently, under title 37, basic pay, the basic allowance for quarters (BAQ), and the basic allowance for subsistence (BAS) are adjusted by an equal amount based on private wage growth as determined by the ECI. Reallocation among elements is permitted. The VHA is adjusted independently. As a result, BAQ (the largest element of the housing allowance) and BAS are adjusted in relation to wage growth and without regard to actual cost. In all cases, however, total RMC increases would equal civilian wage growth.

As noted elsewhere, the QRMC recommends combining BAQ and VHA into a single housing allowance and implementing a price-based adjustment process in which both housing and food allowances would be adjusted based on price, *not wage* growth. These recommendations dictate revising the current adjustment process.

*The 7<sup>th</sup> QRMC recommends applying the military pay raise (full ECI) to average total RMC when price-based allowance adjustments are fully implemented.*

As a result:

- Subsistence and housing allowances would be adjusted by the change in the costs of food and housing, respectively.
  - All service members would get the same adjustment to their subsistence allowance.
  - Housing adjustments would be based on local housing costs.
- The change in basic pay would be the amount necessary to cause the change in total RMC to equal the ECI; all service members would get the same percentage basic pay raise.
- If the annual pay raise is held below the full increase implied by civilian pay growth, the percentage changes for each element should be reduced proportionately in the actual pay raise.

Our interim recommendations preserve the current pay adjustment process, with a technical modification to current law so that the members' pay raises will match civilian pay growth, as measured by the ECI. This recommendation reflects the fact that the ECI is accepted by the services and that it preserves linkage with federal civilians, both of which are especially important in light of the current level of uncertainty among military personnel.

Over the longer term, when price based allowances are implemented, our recommendation would insure that the goals of equity and efficiency are met through the modifications proposed. Moreover, it would, for the first time, establish a consistent, logical basis to guide the allocation of the pay raise across the elements of RMC.

The result of these changes would be a coherent system for pay adjustments that would be sensitive to the cost changes in food and housing that the allowances are intended to reflect while allowing total RMC to grow at rates that reflect growth in the civilian economy.

## ANNUAL PAY ADJUSTMENT

### CHAPTER 3—WHAT ARE THE FUTURE IMPLICATIONS OF THE CURRENT LINKAGE BETWEEN CIVILIAN AND MILITARY PAY ADJUSTMENTS?

#### OVERVIEW

Congress has demonstrated its intent to maintain parity between the civil service and the private sector by stating in 5 U.S.C. §5301: "Federal pay rates [should] be comparable with non-Federal pay rates for the same levels of work within the same local pay area." To achieve this, Congress has indicated that the total GS pay raise (basic pay plus locality pay) will be equal to the full ECI. If the military is to maintain a level of pay competitive with nonmilitary alternatives, the military pay raise should also be equal to the full ECI.

#### CURRENT PROCESS

The current military pay adjustment process, with its link to the GS raise, is spelled out in 37 U.S.C. §1009. Subsection (b)(3) of that section states that the annual adjustment shall "provide all eligible members with an increase in each element of compensation . . . which is of the same percentage as the overall average percentage increase in the General Schedule rates of *basic pay* for civilian employees" (emphasis added). This provision of the military pay statute has remained essentially unchanged since it was implemented in 1974. The key features of the annual military pay adjustment mechanism (prior to FEPCA of 1990) are the following:

- *Elements of compensation.* The current system applies to RMC excluding the Variable Housing Allowance: basic pay, BAQ, BAS and implied tax advantage. The VHA has been annually adjusted according to an independent set of rules.<sup>1</sup>
- *Allocation among elements.* Over the 17 years between FY 1975 and FY 1991, the pay raise has been allocated uniformly to all elements of RMC on 14 occasions. The BAQ allocation has exceeded the average rate of increase on three occasions, and BAS has exceeded the

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<sup>1</sup>When VHA was introduced, RMC was redefined to include it. RMC exclusive of VHA is now called *Basic Military Compensation* (BMC). We will use RMC, with the understanding that the current adjustment process does not include VHA.

average percentage increase on one occasion.<sup>2</sup> This history is not inconsistent with the notion that the underlying allowances—BAQ and BAS—should bear a relationship to prices; however, the current mechanism does not consistently provide for this.

- *Linkage to the GS pay raise.* The linkage between the military pay increase and that of federal workers has prevailed in 20 out of 25 years since 1967, but in 6 of the 9 years since 1983. In every case where the linkage was broken over the last 25 years, the military pay raise exceeded the GS pay raise.
- *Adherence to an index.* Until the FEPCA of 1990, no reference index for the annual pay raise was recognized in legislation.<sup>3</sup> For the military adjustment process, the PATC survey was the informal reference index, through the linkage to the GS pay raise, at least through FY 1982. Arguably, the ECI replaced the PATC, informally, thereafter. In any case, there are no instances where the actual military pay raise was the same as either the rate of increase implied by the PATC or by the ECI in the last 25 years. This does not mean, of course, that these indexes did not influence the pay raise.<sup>4</sup>
- *Differential allocations within the basic pay table.* There are some instances where the military pay raise was allocated differentially by grade, year of service, or both. Most notably, this occurred during transition to the all volunteer force in the early 1970s (larger increases to first term members) and in the early 1980s (larger raises for career noncommissioned officers (NCOs)). However, differential allocations by grade and year of service have been relatively infrequent.

A clearly articulated, rational policy for making annual pay adjustments could avoid uncertainty and misunderstanding by those most affected by these decisions—the military members. Because some members live in government housing while other do not, and because of linkages between the elements of RMC and retirement pay, income taxes, and social security taxes, it is important that military personnel understand the reasons for a given allocation. This is not to suggest an inflexibly tied set of rules. However, there is value to the compensation system of having an explicit framework for pay raise allocations, and, when discretionary authority is exercised, that the reasons for the exceptions be explained in terms of the underlying framework. A review of the history of the system, both in legislation

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<sup>2</sup>The one time that BAS exceeded the average increase (15 Sep 80) was, in fact, a separate raise apart from the normal annual adjustment.

<sup>3</sup>The law did not specifically mention any particular index. It required only that GS pay be adjusted considering "...the rates of pay for the same levels of work in private enterprise as determined on the basis of appropriate annual surveys that shall be conducted by the Bureau of Labor Statistics." 5 U.S.C. §5305. The PATC is the survey of these levels of work.

<sup>4</sup>Moreover, the indexes were also used to estimate *catch-up* pay raises, once GS or military pay had fallen behind the rate of growth implied by the annual rate of change in the index.

and its application, suggests that no such framework for adjustment has been articulated or followed.

## **THE FEDERAL EMPLOYEES PAY COMPARABILITY ACT OF 1990**

In 1990 FEPCA<sup>5</sup> altered the basis on which the GS percentage pay raise, and therefore the military percentage pay raise, is determined. Elements of the FEPCA directly affecting the military pay raise process include:

- The raise to GS basic pay is based on the ECI.
  - In 1992 and 1993, the GS basic pay raise must equal the full ECI.
  - Starting in 1994, the raise applied to GS basic pay will equal the ECI minus one-half.
- The President can recommend an alternate (i.e., smaller) raise if he determines this would serve the national interest.
  - This discretionary provision is the same as has existed since 1967.
  - During the years when the PATC was the index used, it was actually followed only once.
- In addition to their basic pay, Federal civilians who live in high-wage areas will receive a locality-based comparability payment.
  - Locality payments will close the pay disparity that currently exists between the civil service and the private sector and, in effect, convert the Federal civil service compensation system to a local, vice a national, system.
  - After a nine-year transition period, locality payments will bring all Federal employees to no more than a 5 percent local pay disparity.
  - It is the intent of the law that, once locality payments have brought all Federal civilian employees to within 5 percent of the local prevailing wage level (after the transition period), the total raise (the basic pay raise plus the national average locality payment increase) will approximate the full ECI.<sup>6</sup>

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<sup>5</sup>Public Law 101-509, title I, §101(a)(1), Nov. 5, 1990, 104 Stat. 1429-1439; title VI, §633, 104 Stat. 1481; and title VI, §644, 104 Stat. 1482.

<sup>6</sup>Section 529, title 1, §101(e) of Public Law 101-509 provided that: "It is the sense of the Congress that the total funds dedicated to adjustments under sections 5303 (Annual adjustments to pay schedules) and 5304 (Locality-based comparability payments) for any year be no less than the total funds that would have been dedicated to adjustments under such section 5303 for such year had the full change in the ECI been applied to pay rates for such year."

- GS retired pay will be based on the sum of basic pay and any locality payment. (Military retired pay is, of course, based only on basic pay.)

The FEPCA was written to facilitate management of the civil service; but the civil service operates under fundamentally different conditions than the military—one should reasonably expect different provisions for pay management. In general, the civil service recruits and employs in a local area. Maintaining competitive pay relative to increasingly diverse (at least in local costs and wages) labor markets is effective and efficient—and, it provides a manageable mechanism for recouping lost ground in overall pay.

## IMPLICATIONS OF FEPCA

The following implications of FEPCA bring into question the advantages of maintaining the current linkage between the military and the GS:

- The design of the GS pay adjustment system (specifically, the locality payment adjustment) insures that the GS will maintain comparable pay growth even with basic pay increasing by the ECI minus one-half. The military has no independent equivalent to locality payments to make up the difference.<sup>7</sup>
- The provision that raises pay by the ECI minus one-half, if extended to the uniformed services, will insure that military pay (including retired pay and reserve drill pay) steadily erodes against civilian wages over time.

Although not the explicit intent of the law, FEPCA will result in the military getting the ECI minus one-half, while GS employees on average will get (when locality pay is considered) the full ECI. In the short run, establishing the principle that military pay should be adjusted at a rate less than needed to keep pace with the civilian sector may send the wrong signal to the men and women in the armed forces already facing a great deal of uncertainty because of the force reductions. In the long run, the small gap between civilian wage changes and military pay adjustments created each year by this process will grow into significant differences in pay levels and begin to cause recruiting and retention problems.

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<sup>7</sup>Under the provisions of the FEPCA, even though GS basic pay will increase by only the ECI minus one-half, total pay will grow by the full ECI. This will occur because the locality payment will make up any loss in basic pay by increasing total pay to match local wage growth. For example, assuming local wage growth equaled the full ECI, the adjustment made to the locality payment would cause total pay to increase by exactly the one-half percent that basic pay failed to grow. The military pay and allowance system doesn't do this. The premise behind the design of military allowances is based on a comparison of national median cost levels to current average allowance levels. When these specific costs change, so should the levels of the allowances. The allowances don't, however, actively influence the total growth of military pay. That is, their growth won't compensate for continued erosion of basic pay.

## ALTERNATIVES

There are two alternatives to amend the current law (title 37) to achieve full ECI for the military.

The first alternative is to amend that law such that military pay would be raised by an amount equal to the GS basic pay raise plus the average change in the locality payment, the total raise not to exceed the full ECI. The law would read as follows:

provide all eligible members with an increase in each element of compensation . . . which is of the same percentage as the overall average percentage increase in the General Schedule rates of basic pay plus the overall average percentage increase in the rates of locality-based comparability payments for civilian employees, the total percentage not to exceed the percentage increase in the ECI.

This alternative maintains a stronger link to the GS and would also insure equal and equitable treatment for all Federal employees. Of course, it virtually ensures that budgetary constraints applied to civilian Federal workers would also be extended to the military.

The second alternative is to amend the law such that military pay would be adjusted by simply setting the raise equal to the full ECI. The law would read as follows:

provide all eligible members with an increase in each element of compensation . . . which is of the same percentage as the ~~overall average~~ percentage increase in the ~~General Schedule rates of basic pay for civilian employees~~ ECI.

One advantage of this option is its simplicity. Another advantage is that the military pay raise, while still linked to the GS (same index), would not automatically be tied to independent policy decisions relating to Federal civilian pay raises.

Both alternatives support the full ECI for the military pay raise. The QRMC favors the second alternative.

## FINDINGS AND RECOMMENDATIONS

Based on our review of the current military pay adjustment process, the 7<sup>th</sup> QRMC finds that current provisions of the FEPCA do not support the objective of the annual military pay adjustment:

- The military link to the GS basic pay raise results in the military pay raise equalling the ECI minus one-half, vice the full ECI.
- Military pay will erode against private sector wages unless title 37 is amended.

*The Seventh Quadrennial Review of Military Compensation recommends amending 37 U.S.C. §1009, to set the military pay raise equal to the full ECI.*



## ANNUAL PAY ADJUSTMENT

### CHAPTER 4—WHAT IS THE MOST APPROPRIATE INDICATOR OF CIVILIAN WAGE GROWTH?

#### OVERVIEW

To manage the annual military pay raise, DoD needs a measure of changes in civilian wages that indicates how much military pay should be adjusted to maintain parity. Ideally, the chosen indicator (index) will have two characteristics:

- It will match as closely as possible the alternative career paths open to individuals choosing, or who have chosen, a military career.
- It will accurately measure, year by year, the general trend in pay accruing to those alternative civilian career choices.

The government produces a number of indexes that measure civilian wage growth for various segments of the private sector. Choosing which of these indexes to use in the annual military pay adjustment process is important, and has been the subject of much study. Today, the ECI determines the pay raises for Federal workers, including the military.

In this chapter we discuss indexes of civilian wage growth to use, based on how well the candidates satisfy the requirement to measure the wage growth of military peers. We begin by reviewing why the ECI has become the index of choice, then briefly describe and assess the ECI. Next, we review the construction of a new index, the DECI, developed as a possible alternative to the ECI. And finally, we summarize our findings and recommendations concerning the use of both the ECI and DECI.

#### REVIEW OF AVAILABLE INDEXES

In 1982, a joint services study group<sup>1</sup> examined various indexes and surveys to determine which measure of civilian pay growth best supported the annual pay raise process. In this study, the group established a set of criteria against which they compared 12 candidate indexes and surveys (see Table 4-1). From those 12, they selected the PATC survey, a combined PATC and Area Wage Survey (AWS), and the ECI as the three most promising. They reevaluated these three against the same criteria, and determined that the ECI best met

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<sup>1</sup>U.S. Department of Defense, *Military Pay Adjustment Mechanisms, A Joint Services Study* (Washington, 1982).

the needs of the military. Their reasons for this choice can be summarized as follows:

- The ECI covers civilian jobs comparable to about 70 percent of the military occupations.
- These data are readily available to inform the budget process.
- The ECI accurately reflects civilian wage growth.

Even though the study group chose the ECI as the best available alternative at the time, the military's continued linkage to the Federal civil service dictated use of the same index as that applied to the GS. Since 1967, the PATC has formally guided the adjustment of GS pay.<sup>2</sup>

Beginning in the early 1980s, the ECI was used as a secondary indicator of civilian wage growth. Neither indicator was followed precisely until Congress enacted FEPCA. This Act mandated use of the ECI to adjust GS pay and, because of its linkage, military pay.

**Table 4-1. Indexes Evaluated in 1982 Study**

- |  |
|--|
| <ul style="list-style-type: none"> <li>• Professional, Administrative, Technical and Clerical (PATC) Survey</li> <li>• Area Wage Survey (AWS)</li> <li>• Private, Nonagricultural Production and Non-supervisory Workers Earnings</li> <li>• Employment Cost Index (ECI)</li> <li>• Consumer Price Index</li> <li>• Blue Collar Composite</li> <li>• Fire and Police Wages</li> <li>• Federal Wage System Surveys</li> <li>• Age/Earnings Profile</li> <li>• Professional, Technical, and Kindred Workers Earnings</li> <li>• Clerical and Kindred Workers Earnings</li> <li>• Service Workers.</li> </ul> |
|--|

## THE EMPLOYMENT COST INDEX<sup>3</sup>

### What Is the ECI?

The ECI measures the change in what employers pay their employees. Thus, the ECI is a survey of *businesses*. Data are collected by the Bureau of Labor Statistics (BLS) for approximately 12,000 jobs in about 2,200 establishments in the private non-farm economy each quarter. The major distinguishing features of the ECI are the following:

- Provides employers' costs for wages and salaries
- Includes all employees in the private non-farm sector
- Measures change in compensation rates

<sup>2</sup>The law did not specifically mention any particular index. It required only that GS pay be adjusted considering "...the rates of pay for the same levels of work in private enterprise as determined on the basis of appropriate annual surveys that shall be conducted by the Bureau of Labor Statistics" (5 U.S.C. 5305). The PATC is the survey of these levels of work.

<sup>3</sup>U.S. Department of Labor, Bureau of Labor Statistics, *BLS Measures of Compensation* Bulletin 2239 (February 1986), 61-68.

- Subdivides data by industry and occupation.

The ECI measures changes in the *price* of labor, defined as the rate of compensation per employee hour worked. The ECI is a fixed-weight index. That is, the employment weights are held fixed at the industry and occupation level, thus controlling for the effects of people changing jobs, changing their occupations, or moving to industries with different pay levels. This ensures relative stability across the business cycle. Currently (since mid-1986), the weights are (were) derived from the number of employees in specific occupations and industries as reported in the 1980 Census.

Data are collected for the pay period which includes the 12th day of the months of March, June, September, and December. The results are available about one month after the survey. Thus, the September survey data are available in late October, when they can inform the January budget submission.

### **Assessment**

The advantages of the ECI identified in the 1982 study are still valid today. It has become the most widely accepted index of civilian wage growth throughout the private and public sector. Both the FEPCA and the Ethics Reform Act of 1989 use the ECI to set pay raises for GS employees, the Congress, and other senior members of the Federal government.

Since 1982, actual military pay raises have fallen behind private wage growth as measured by the ECI. Yet, during this same time frame, military accession and retention have remained relatively strong. This paradox raises the question of whether the ECI is attuned to the military population.

Wages grow at different rates for different population subgroups. The distribution of subgroups differs between the military and civilian work forces. Would it therefore be more appropriate to use an index that is weighted based on the demographics of the military population?

Because of this dichotomy between low pay growth and high retention and the question of how to compare civilian and military populations, a new index, the DECI, was developed for potential use in the military pay adjustment process.

## DEFENSE EMPLOYMENT COST INDEX (DECI)<sup>4</sup>

### What Is the DECI?

The DECI is a new index of civilian wage growth that was designed by RAND as an alternative to the ECI. Development of the DECI began well before the start of the 7<sup>th</sup> QRMC. However, we became deeply involved in its final development. We imported the capability to run, update, and evaluate the DECI model in house during the course of our review.<sup>5</sup>

The DECI uses wage and demographic data from the CPS.<sup>6</sup> It reports series of wage changes for the civilian population that can be set to reflect the military population by demographics of age, education, and occupation. The DECI's abilities to mirror the military population and separate specific subpopulations for detailed study set it apart from the ECI.

### How Does the DECI Differ From the ECI?

Population Differences. As explained previously, the ECI is calculated from a survey of civilian businesses. The characteristics of the survey population reflect those of the general work force. However, there are some significant demographic contrasts between the general civilian work force and the members of the Armed Forces. Most notably, the military population is younger and educated differently, as shown in Figure 4-1, and it is mostly male.<sup>7</sup> The DECI can account for these differences.

Fixed vs. Changing Weights. The ECI takes its weighting factors from a fixed base year. Therefore, it reflects wage changes from the base year population, not for the current work force. The DECI, on the other hand, is a chain index, which means that it accounts for changes in job mix over time by changing the weighting factors each year. The advantage of the chain series is that it reflects changing costs for the current job mix.

In contrast to the ECI, the DECI derives weights from current military manpower data to "correct" its civilian wage data. This weighting system, based on age, education level, and

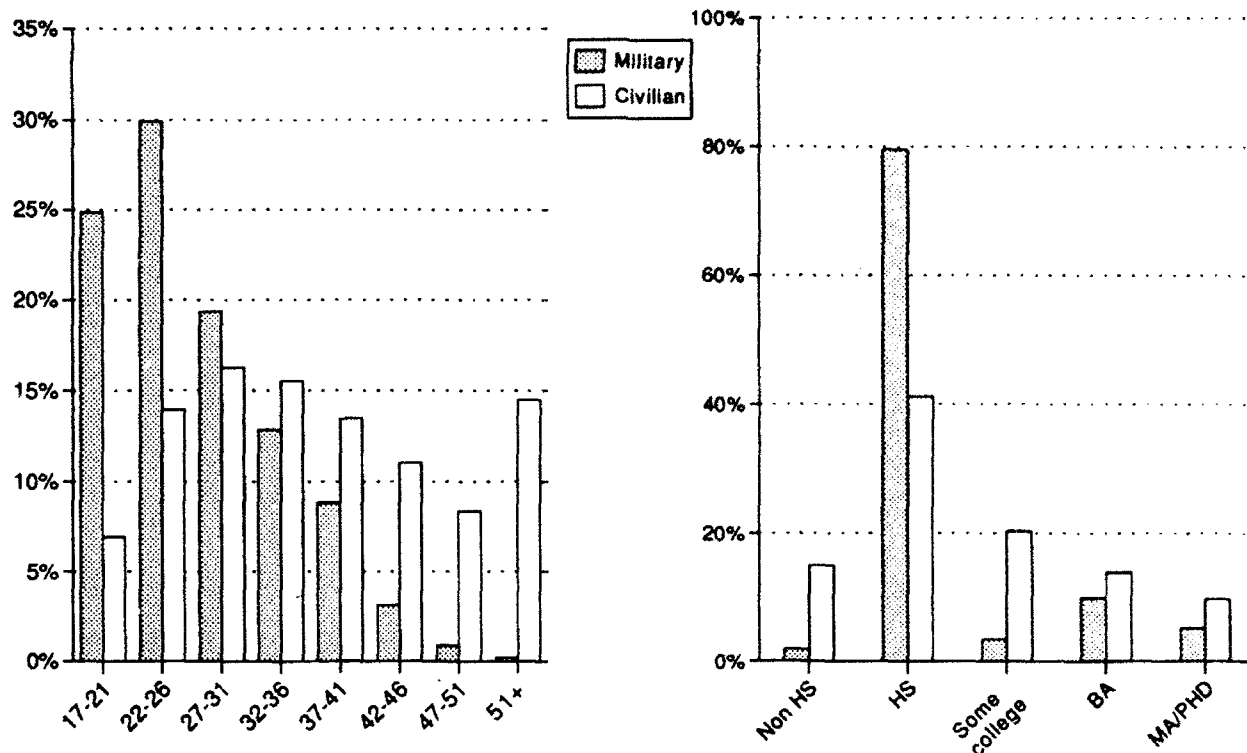
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<sup>4</sup>This section contains a brief description of the DECI. A more detailed description and discussion can be found in the following RAND working drafts: Hui Wang, *A Critique of the Employment Cost Index as a Guide to Setting Military Pay Increases*, September 1990; Jeannette VanWinkle, *Estimating the Military/Civilian Pay Gap: ECI vs. DECI*, February 1991; Christine E. Peterson and James R. Hosek, *Relative Pay Measures and Defense Manpower Trends: Validating the DECI*, April 1991; and James Hosek, Christine Peterson, Jeannette VanWinkle, Hui Wang, *A Civilian Wage Index for Defense Manpower*, January 1992.

<sup>5</sup>The QRMC has compiled *Documentation for Computing the Defense Employment Cost Index*, a detailed description of the procedures, as a guide for those interested in duplicating them.

<sup>6</sup>See Appendix A for a detailed discussion of the CPS.

<sup>7</sup>Males are 90 percent of military strength but only 57 percent of the civilian work force.



**Figure 4-1. Age and Education Distribution—Military vs. Civilian, FY 1990**

occupation category, creates an index that shows pay changes for a notional civilian population closely resembling the military population. This methodology enables an exact match based on two of the most important wage determinants, age and education.<sup>8</sup>

We can see the importance of accounting for age and education by looking at wage growth for populations broken down by those characteristics. As illustrated in Figure 4-2, wage growth for younger groups has been slower, and the college-educated population has experienced faster wage growth than those with less education.

Clearly, if the age and education distributions of two groups differ, their rates of wage growth are also likely to differ. Management of the annual military pay raise will be more efficient, and structural reviews sounder, to the extent that DoD has information about how the incomes of significant subgroups within the population are changing.

<sup>8</sup>It is easy to match people in the military and civilian populations based on age and education. Making matches between military jobs and civilian jobs is extremely inexact and arguably impossible.

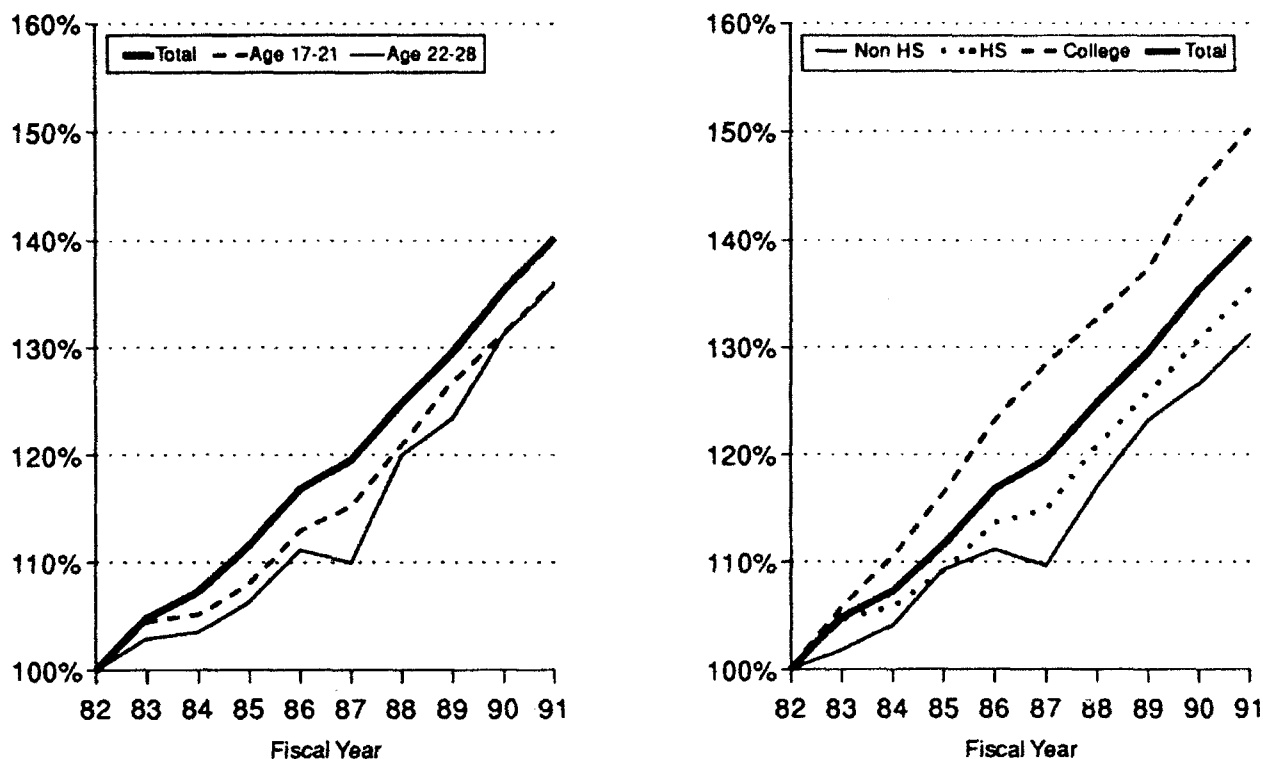


Figure 4-2. Wage Growth for Different Age and Education Groups

#### Construction of the DECI

**Data Collection Procedures.** The DECI is constructed from the CPS March Supplement data files.<sup>9</sup> The data used to construct the DECI contain a representative weighted sample of the civilian population of full-time workers.

The raw data are grouped into cells, classified on the basis of year, sex, race, education, age, and occupation. Each cell is assigned a weight that is the sum of the March CPS weights of all of the individuals in the cell. Within each of these cells, we calculate the average weekly wage as a weighted average of the total population in the cell.

**Calculating Military Weights to Apply to Civilian Wage Data.** Employment quantities are extracted from military personnel records supplied by the Defense Manpower Data Center (DMDC). The DMDC data are grouped into cells that are classified by sex, race, education, age, year, and military occupation. The DMDC data also give us the additional categories of service, officer or enlisted, rank, year of service, expiration of term, and Armed Forces Qualification Test (AFQT) score. In computing the DECI, the cell sizes from the military data are used to weight the average wages from the corresponding CPS cell. Table 4-2 shows, by a notional example, how to compute a weighted average wage.

<sup>9</sup>Ibid, 10-14; and RAND Corporation, *Data Description: Data Prepared for Chris Peterson by Diane J. Macunovich*, Dept. of Economics, Williams College (Santa Monica: RAND, June 9, 1990).

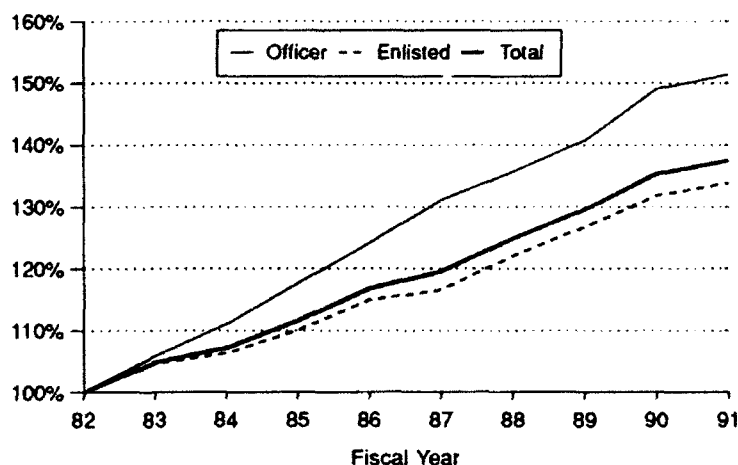
In order to weight the wage information, the cells from the CPS data must have an equivalent cell in the DMDC data. In other words, cells that group together certain military personnel based on age, education, etc., must refer to a corresponding wage in the CPS. However, because the CPS provides sample data from the civilian sector, cells representing certain DMDC combinations have no corresponding civilian wage. When this happens, the wages for the cells not appearing in the CPS data are imputed using regression techniques.

**Table 4-2. Weighted Average Wage Computation**

Age Category	Average Civilian Wage	Times	Military Population Percent	Equals	Weighted Average Wage
17-21	\$15,000	*	25	=	\$3,750
22-26	18,000	*	30	=	5,400
27-31	22,000	*	19	=	4,180
32-36	27,000	*	13	=	3,510
37-41	30,000	*	9	=	2,700
42-46	35,000	*	3	=	1,050
47-51	40,000	*	1	=	400
52+	45,000	*	0	=	0
Weighted average wage (sum)				=	\$20,990

**Producing the Index.** The index is constructed once the wage data (CPS cells) correspond to the employment quantities (DMDC cells). The number produced by the DECI is the percentage change from one year to the next of the military-weighted average of the CPS cells' average wages.

**Creating Different Indexes.** The DECI methodology can produce indexes for subgroups defined by some combination of service, officer or enlisted category, rank, year of service, expiration of term, and AFQT score. That is, a variety of indexes can be created representing specific groups. In this way, one can show changes in private sector pay rates for all military personnel or for fairly specific subgroups. For instance, a separate measure could be created for officers or for enlisted personnel. Figure 4-3 presents DECI pay growth for private sector subgroups similar to officers and similar to enlisted personnel.



**Figure 4-3. Pay Growth Since 1982—According to the DECI**

#### **Additional Applications of the DECI**

The aggregate DECI presents civilian income changes representative of the current military population. Moreover, because the DECI can be defined for different subgroups within the military, one can also analyze wage changes for these groups. It therefore allows

military personnel managers the flexibility to track civilian wage growth of various subgroups to evaluate the competitiveness of military pay for their members. This unique capability could prove invaluable for personnel and pay management. Possible uses include:

- Management of the selective reenlistment bonus (SRB) program.
- Structural review of the compensation system.<sup>10</sup>

### **Assessment**

The DECI is a promising and useful new tool for personnel and pay management. Other indexes of civilian wage growth have been criticized because of their inability to match the atypical demographic characteristics of the military population. The primary advantage of the DECI is that it was designed precisely to reflect wage growth in a portion of the civilian population that most closely resembles the military population. There are, however, several issues with policy implications that need to be resolved to refine the DECI.

Time Frame. The DECI lags about nine months behind the ECI. It uses the March supplement of the CPS, released by the Census Bureau in time for the data to be included in the budget submission. However, this wage information is based on income for the prior calendar year. Consequently, the information is, at best, nine months old at publication, whereas ECI wage data are one to two months old when used in the budget process.

Different Index from GS. Since 1967, the law has mandated the same pay raise for the military and Federal civil service. This provision has remained intact through several periods of great change in the military. We can therefore infer that support for adjusting the pay of all Federal workers according to the same index remains. If the military were to use the DECI, while the Federal civilians used the ECI, this relationship would be severed. Policy makers should carefully investigate the implications of this action:

- Adjusting the pay of the military and Federal civilian workers according to different indexes would probably result in different pay raises.
- Military and Federal civilian employees often work side by side. A disparity in the amount of the annual pay raise could undermine the sense of unity within the Federal work force.

Weighting Scheme. Weighting the DECI with the demographics of the military population means it leans heavily in the direction of matching the wage change of the younger, less educated population. In the 1980s, civilian youth wages grew at a slower rate than the wages of the civilian population as a whole. Military pay also grew at a slower rate than the wages of the civilian population as a whole. Yet, for the youth population within the military, their pay raises remained competitive with their civilian counterparts. This, in part, may explain

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<sup>10</sup>RAND's analysis indicates that the DECI correlates better than the ECI with accession and retention behavior of enlisted personnel.



why the DECI more closely tracks accession and retention rates than the ECI. Hence, selected use of the DECI in personnel management could improve understanding of factors affecting military personnel retention, leading to improved policies, particularly with regard to special and incentive pays.

However, for the older, more educated career force, the DECI indicates a growing disparity between military and civilian pay. Use of the DECI raises the possibility that pay levels of career members would lag their civilian peers, perhaps resulting in a lower-quality career force in the future. Moreover, individuals in both the military and private sector consider not only current wages, but expected future wages, in making decisions to enter or remain in an occupation. Hence, an inappropriately low rate of wage growth of career members may affect the continuation decisions of members in the process of making a career decision. Replacing the career force is difficult, time consuming, and expensive. The significance of this becomes more apparent when one considers the potential retention consequences of the REDUX system.

This raises a significant policy issue: Should the pay adjustment process for the career force be so heavily influenced by the wage growth of the youth population?

**Stability.** The DECI is based on data that represent the income of an individual, rather than the cost of keeping a person in a job (as in the ECI). Therefore, the wage data from the CPS vary more across the business cycle. Income growth from year to year, on average, will vary (peak to peak) by 5 percent or more, based on where the economy is in the cycle. Figure 4-4 displays the annual values of the ECI and the DECI from 1981. It is apparent that the DECI is much more sensitive to the current economic condition,<sup>11</sup> even though both indexes demonstrate a similar multi-year trend.

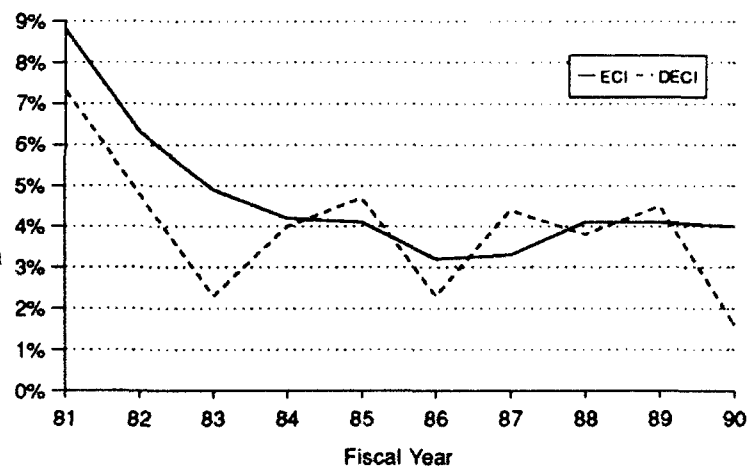


Figure 4-4. ECI and DECI Annual Rate of Change

This is a direct result of the differences in the data sources used to build the two indexes. During a business downturn, individuals change employment, often moving out of higher-paying jobs into lower-paying jobs. Such movement is captured in the CPS, but not in a fixed-weight index like the ECI, which preserves the measurement of pay increases for persons retaining those jobs as originally defined. The DECI is therefore a more accurate

<sup>11</sup>Using CPS data causes this sensitivity. We expand on this theme in Appendix A.

index of private sector wage changes, and consequently is also more sensitive to the economic cycle. This sensitivity causes its relatively large fluctuations.

Over time, the DECI will "catch up" as employment trends reverse. However, in the interim, fluctuations will be injected into the index, which would in turn be injected into military pay increases, including changes in retirement income. Such large year-to-year fluctuations are especially important to people approaching retirement. Given that Federal civilians use an index (ECI) that is more stable, should DoD support an index that causes an individual's pay to be negatively affected by a transitory economic downturn? On the other hand, should DoD pay a premium to individuals who retire during an upturn in the youth labor market?

Apart from its potential use in the actual pay adjustment process, the DECI promises to become a valuable new tool for personnel management. It can enable managers to better understand the growth in wage opportunities for different segments of the officer and enlisted force. DECI results can be disaggregated to reflect the earnings growth for the civilian population that represents, demographically, first-term enlisted members, senior officers, and so forth. Because its method allows flexible applications, the DECI should be matured as a career-force focused indicator of the annual pay raise, with sub-indexes developed as tools to aid management of pay going to segments of the force and to signal pending need for structural review.

## **FINDINGS AND RECOMMENDATIONS**

Based on our review of the ECI and DECI, we find that:

- The ECI remains the most appropriate index for use in the military pay adjustment process.
- The DECI, though not mature enough for use as the primary index for the pay adjustment process, is a promising new measuring device with applications beyond the pay adjustment process. Its unique capabilities can be invaluable for personnel and pay management in areas that include:
  - Management of the SRB program
  - Structural review of the compensation system.

Our decision to recommend staying with ECI until the DECI can mature reflects that the ECI is adequate for the present, but that the DECI will eventually satisfy our requirements better.

*The 7<sup>th</sup> QRMC recommends continuing use of full ECI as the target amount of the annual military pay adjustment. The Office of the Secretary of Defense should underwrite further development of the DECI as a personnel management tool and as a candidate index for future use in the pay adjustment process.*

## ANNUAL PAY ADJUSTMENT

### CHAPTER 5—HOW SHOULD THE MILITARY PAY ADJUSTMENT BE APPLIED TO THE ELEMENTS OF RMC?

#### OVERVIEW

The military and the private sector use different systems to pay employees. The private sector uses a salary system to pay wages, while the military services pay their people with a pay and allowances system. The ECI measures wage growth in the private sector. To make sure we are comparing *apples to apples* during the annual pay adjustment process, it is first necessary to establish the basis for comparing the two systems.

In 1967, Congress passed the military pay adjustment statute that first specified that RMC would be increased by an amount comparable to that enjoyed by the military members' civilian counterparts.<sup>1</sup> This statute remains in effect, thereby establishing a basis for comparing the two systems.

This chapter traces the military pay adjustment process since 1967 and then provides recommendations for the adjustment of each cash element of RMC including basic pay, housing, and the subsistence allowance.

#### HISTORICAL REVIEW<sup>2</sup>

In 1967, the intent of Congress was to adjust RMC at a rate comparable with civilian wage growth. However, in reality, RMC and the individual elements of RMC (basic pay, BAQ, and BAS) have been adjusted in a variety of ways over the years. The purpose of this review is to provide a better understanding of how the various elements of RMC were in fact adjusted.

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<sup>1</sup> In 1967, when the current military pay adjustment statute was enacted, the Congress stated that the intent of the legislation was to: "insure that uniformed services personnel will, in the future, be given increases in the level of their compensation comparable to that enjoyed by their civilian contemporaries . . . [by] provid[ing] increase[s] in . . . 'regular military compensation' . . . defined as basic pay, quarters, and subsistence allowances, either in cash or in kind, and the tax advantage thereon" (House Report No. 90-787, 1967, 3). This intent, not readdressed in subsequent amendments to the statute, remains in effect.

<sup>2</sup> A more in-depth discussion of the evolution of military pay adjustments is contained in Appendix B.

## 1967 to 1974

In 1967, for the first time, the military pay raise was tied to the GS raise.<sup>3</sup> The law stated that "whenever the General Schedule of compensation . . . is adjusted upwards, there shall immediately be placed into effect a comparable upward adjustment in the monthly basic pay authorized members of the uniformed services." The law also stated that "such adjustments shall . . . provide all personnel of the uniformed services with an overall average increase in regular compensation which equates to that provided General Schedule employees." Finally, the law defined *regular compensation* as "basic pay, quarters and subsistence allowances (either in cash or in kind), and the tax advantage on those allowances." Hence, the increase applied to total RMC was to equal that of the GS employees.

However, confusing matters, the law required that:

- The entire pay raise had to be applied to basic pay, which at the time made up about 75 percent of RMC.
- Any adjustments to BAQ and BAS were not considered in the normal procedure.

Although the intent was to increase RMC by the same percentage as the GS increase (which in turn was tied to private wage growth), in fact, RMC grew at a different rate than the GS rate because basic pay was adjusted ignoring any adjustments to BAQ and BAS.

These calculations for the 1973 pay raise show how the system worked in practice:

- The GS raise for fiscal year 1973 was 5.14 percent.
- A 6.69 percent increase in basic pay yielded RMC growth of 5.14 percent because:
  - Basic pay equaled 76.8 percent of RMC, and
  - 5.14 percent divided by 76.8 percent equaled 6.69 percent.

As reflected in Table 5-1, the raises to RMC during this period exceeded (except for 1972, when food costs—BAS—decreased) the GS raises, because BAS was increased separately. Going back to our example from fiscal year 1973, we can show why the actual RMC increase in that year equaled 6 percent instead of 5.14 percent:

- In addition to the basic pay raise of 6.69 percent,
  - BAS (7.8 percent of RMC) was raised 11 percent, and
  - BAQ remained unchanged.

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<sup>3</sup>Public Law 90-207, §8, Dec. 16, 1967 (the Rivers amendment).

- Because BAS did not remain constant, the total raise actually was:

- 76.8 percent times 6.69 percent (basic pay) plus 7.8 percent times 11 percent (BAS), or 6.0 percent.
- Hence, the total RMC increase equaled 6.0 percent.

This procedure was followed through 1974.

**Table 5-1. Comparison of Military and GS Civilian Pay Raises: 1967-1974**

Fiscal Year	General Schedule Raise (percent)	Basic Pay Raise (percent)	Regular Military Compensation Raise (percent)
1967	4.50	5.60	5.20
1968	4.90	6.90	5.20
1969	9.10	12.60	9.30
1970	6.00	8.10	6.60
1971	5.96	7.90	6.80
1972	5.50	7.21	5.40*
1973	5.14	6.69	6.00
1974	4.77	6.16	7.30

\*The only time that the RMC raise was less than the GS raise.

### 1975 to 1980

In 1975, the law was changed so that the GS raise was applied equally to all three cash elements of RMC. The adjustment to BAS, separate from basic pay, was causing RMC to increase faster than intended, and placement of the entire raise into basic pay was ignoring the increasing value of in-kind quarters.<sup>4</sup> Congress also realized that the disproportionately large increases to basic pay were increasing the costs of retirement and other drag-alongs, and that the lack of any adjustment mechanism for BAQ failed to address the problem of how to keep up with the accelerating growth in housing costs.

The change had the effect of re-emphasizing that the raise in RMC should equal the GS raise. Table 5-2 shows that this procedure was applied in all years from 1975 through 1980, except in 1977 and 1978, when, because of the rapid growth of housing costs, part of the RMC raise was reallocated into BAQ from basic pay.<sup>5</sup>

### 1981 to 1991

From 1981 through 1990, the procedure remained essentially the

**Table 5-2. Comparison of Military and GS Civilian Pay Raises: 1975-1980**

Fiscal Year	General Schedule Raise (percent)	Basic Pay Raise (percent)	Regular Military Compensation Raise (percent)
1975	5.52	5.52	5.52
1976	5.00	5.00	5.00
1977	4.83	3.62	4.83*
1978	7.05	6.20	7.05*
1979	5.50	5.50	5.50
1980	7.02	7.02	7.02

\*Raise in basic pay was reallocated to BAQ in these years

<sup>4</sup>See U.S. Senate, Report No. 93-1132, 93rd Congress, Second Session, 1974.

<sup>5</sup>The authority to reallocate a portion of the raise among the elements of RMC was provided by Public Law 94-361, §303, July 14, 1976, 90 Stat. 925.

same. VHA was added in 1981 but was ignored in the adjustment process.<sup>6</sup> Table 5-3 shows that this procedure was adhered to with the following exceptions:

- In 1981 and 1982, the military received increases in excess of those given the GS employees because of severe accession and retention problems.
- In 1985 and 1986, the GS pay raise was suppressed.
- In 1989, Congress raised BAQ by a greater amount than the rest of the elements of RMC to prevent the housing allowance from falling too far behind housing costs. Instead of the 4.3 percent across-the-board raise that had been requested by the Administration and approved by the Senate, the House reduced the raise for basic pay and BAS to 4.1 percent and increased the BAQ raise to 7 percent.

**Table 5-3. Comparison of Military and GS Civilian Pay Raises: 1981-1991**

Fiscal Year	General Schedule Raise (percent)	Basic Pay Raise (percent)	Regular Military Compensation Raise (percent)
1981	9.1	11.7	11.7 <sup>1</sup>
1982	4.8	14.3	14.3 <sup>1</sup>
1983	4.0	4.0	4.0
1984	4.0	4.0	4.0
1985	3.5	4.0	4.0 <sup>2</sup>
1986	0.0	3.0	3.0 <sup>2</sup>
1987	3.0	3.0	3.0
1988	2.0	2.0	2.0
1989	4.1	4.1	4.4 <sup>3</sup>
1990	3.6	3.6	3.6
1991	4.1	4.1	4.1

<sup>1</sup>Catch-up raise to alleviate severe accession and retention problems.

<sup>2</sup>GS raises were suppressed; military raises set to keep from falling behind again.

<sup>3</sup>Included a seven percent BAQ raise reflecting concerns about rising housing costs.

## 1992

Finally, in 1990 the FEPCA revised the GS pay adjustment process. While affecting the total raise from 1992 forward, it had no effect on distribution of the raise among the elements of RMC.

## Conclusions

The precedent has been established that RMC is the appropriate component of military compensation that correlates with private wages. This precedent can be further supported by looking at how civilians spend their wages. If the objective of the pay adjustment process is to adjust military pay at the same pace with private sector wage growth measured by the ECI, then DoD should adjust the elements of RMC such that the rate of overall change equals the ECI.

Civilians usually receive an overall salary that they use to pay for food, housing, other goods and services, and from which they save for the future. In the military compensation

<sup>6</sup>VHA has been adjusted independently from the other elements of RMC. The relatively small coverage of VHA, as compared to the other elements, has kept any impact on RMC growth to a minimum.

system, basic pay, allowances, and the tax advantage associated with these allowances, which taken together are defined as Regular Military Compensation, most closely correspond to this concept. It is eminently reasonable that the pay adjustment process, matching growth of pay in the private sector, be applied to the elements of RMC.

Figure 5-1 presents a representation of an average civilian paycheck against an average military paycheck (RMC). It is interesting to

note that the average expenditure pattern of private wages and the apportionment of military pay are very similar. People in the private sector, on average, spend about 10 percent of their wages for food, 30 percent for housing, and the remaining 60 percent for other goods and services.<sup>7</sup> RMC is apportioned, on average, as roughly 10 percent for food, 24 percent for housing, and 66 percent (basic pay) for other goods and services.<sup>8</sup>

Based on the correspondence between civilian wages and military RMC, the 7<sup>th</sup> QRMCM concludes that RMC, defined as basic pay, housing and subsistence allowances, either in cash or in kind,<sup>9</sup> and the tax advantage associated with the allowances, is the appropriate reference for comparing military and civilian pay.

Less clear is how the annual pay raise should be allocated among the elements of RMC. Both the legislative history and the historical application of the process, reviewed above, indicate the lack of a logical process or consistent rationale for allocating the annual pay raise among its elements. The next issue therefore is: How do we adjust the individual elements of RMC so that the total equals ECI?

## ADJUSTING THE ELEMENTS OF RMC

Currently, basic pay, BAQ, and BAS are adjusted by an equal amount based on private sector wage growth (ECI). Reallocation among elements is permitted, and VHIA is adjusted independently. As a result, BAQ (the largest element of the housing allowance) and BAS are adjusted in relation to wage growth, without regard to actual costs.

Civ Wages		Mil Pay	
Food	10%	Subsistence	Average RMC
Rent	30%	Housing	
Other	60%	Basic Pay	

**Figure 5-1. Civilian and Military Average Income Expenditure Patterns**

<sup>7</sup>Runzheimer Corporation, March 1991.

<sup>8</sup>As the current housing allowance level expects a member to pay for 20 percent of his housing costs out of his basic pay, addition of this amount (about 5 percent of RMC) to the housing allowance makes RMC apportionment even closer to civilian expenditure patterns.

<sup>9</sup>Even though service members don't get money for them, in-kind allowances have value. That value must be included in total RMC.

If the price of food or housing rises in the national economy, the value of food and housing provided in kind to the member likewise increases. Those members not receiving subsistence and housing in kind must now, on average, pay more for the same quantities consumed. Increasing the allowances of these members by the growth of food and housing prices restores the internal parity in real income—income adjusted for differences in costs of food and housing—between members who receive housing and subsistence in kind and those who receive it in cash.<sup>10</sup> Hence, equity among military members, as well as efficient compensation policy, suggests that allowances be adjusted to reflect changes in underlying prices.

The QRMC recommends combining BAQ and VHA into a single housing allowance, adjustable on the basis of local housing costs, and adjusting BAS according to food cost. These two reforms would force a change in the current method of adjusting the elements of RMC equally, based on wage growth.

This brings us to the heart of the issue. In support of our overall objective to make military pay keep pace with private sector growth, we recommend a simple, logical method for the allocation of the pay adjustment among the elements of RMC in a way that satisfies these criteria. First, increases should be allocated to allowances to reflect average cost growth due to food and housing prices. Then, basic pay should be increased such that the growth in RMC is equal to the rate of growth in civilian wages. When cost growth in housing and subsistence lags behind civilian wage growth, the growth in basic pay will exceed the growth in civilian wages, and vice versa. All members would receive the same rate of increase in basic pay. All members receiving subsistence in cash would receive the same increase, and the housing allowance increase would vary by cost growth at the member's location. A complete description and example of the application of this recommended adjustment process can be found at Appendix C.

If implemented, this mechanism would provide a logical basis for systematic allocation of the annual pay raise. It would allow RMC to grow at a rate matching civilian wage growth, allowances to keep pace with cost growth, and all members to receive the same basic pay increase. For the first time, military members will understand how their pay raises were allocated, and what to expect in the future.<sup>11</sup>

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<sup>10</sup>This does not mean that members are indifferent between in-kind and cash compensation for these items. Rather, the relative value a member placed on in-kind and cash compensation before the price increase is approximately restored by increasing cash allowances by the amount of the price increases.

<sup>11</sup>In addition, if food and housing were the only goods and services with price variation, all members would receive the same *real* growth rate in RMC—the percentage increase in RMC after accounting for cost growth.



## FINDINGS AND RECOMMENDATIONS

Based on our review of the history of military pay adjustments and our study of the components of military pay, we find that setting the growth of RMC equal to the ECI supports the objective of the military pay adjustment process.

*The 7<sup>th</sup> QRMC recommends applying the military pay raise (full ECI) to average total RMC when price-based allowance adjustments are fully implemented.*

As a result:

- The subsistence and housing allowances would be adjusted by the change in the costs of food and housing, respectively.
  - All service members would get the same percentage adjustment to their subsistence allowance.
  - Housing allowance adjustments would be based on local housing costs.
- The change in basic pay would be the amount necessary to cause the change in total RMC to equal the ECI. All service members would get the same percentage basic pay raise.

# **ANNUAL PAY ADJUSTMENT**

## **CHAPTER 6—SPECIAL CIRCUMSTANCES**

### **OVERVIEW**

The QRMC recommendations for the pay adjustment process provided in the previous sections were based on two assumptions:

- Implementation of the QRMC recommendation for cost-based allowances
- Use of full ECI.

This section discusses the implications if either assumption is not fully implemented.

### **INTERIM RECOMMENDATION**

At the time of writing this MTS, no final decision had been made to implement cost-based allowances. Until cost-based allowances are incorporated, an interim change to the current process is justified.

Under the current law, in 1994, basic pay, BAS, and BAQ would be adjusted equally based on ECI minus one-half. The QRMC recommends adjusting equally the three elements of RMC based on full ECI. A proposed amendment to title 37, to carry out this fallback procedure, may be found at Appendix D.

### **REDUCED PAY RAISES**

The QRMC supports an annual pay raise of RMC equal to full ECI. The implication of this recommendation is that the housing and subsistence allowances would be adjusted by cost, and the net adjustment in basic pay and the allowances would result in RMC growth equal to ECI. However, history shows us that competing demand for scarce Federal resources can take a toll on the amount of the annual pay raise for all Federal workers. If, for some reason the pay raise is less than the ECI, then we must reconsider how to adjust the elements of RMC.

To spread the deficit, it is important to recognize that two pay adjustment goals are competing with each other:

- Matching total RMC growth to civilian wage growth.
- Changing allowances based on changes in costs.

Both goals are justifiable. However, if faced with less than full funding, it would be difficult to justify prioritizing one over the other. Therefore, both should receive equal consideration. The QRMC recommends applying the percentage reduction equally to all elements of RMC, rather than taking up the shortfall from basic pay and continuing full funding of the allowances. To demonstrate how this would work, we provide the following notional example:

- Full ECI was 5 percent. Calculation of pay raise percentages resulted in:
  - Basic pay raise of 5.1 percent.
  - Housing allowance raise of 5.2 percent.
  - BAS raise of 3.6 percent.
- Raise capped at 4 percent. The increase in each element would be reduced by 20 percent, or:
  - Basic pay raise of 4.1 percent.
  - Housing allowance raise of 4.2 percent.
  - BAS raise of 2.9 percent.

## ANNUAL PAY ADJUSTMENT

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# ANNUAL PAY ADJUSTMENT

## APPENDIX A—CURRENT POPULATION SURVEY (CPS)<sup>1</sup>

### OVERVIEW

The DECI uses CPS data on civilian workers. What enables the DECI to weight civilian data to military weights is the CPS's provision of demographic attributes of age, education, sex, and race, in addition to earnings data. The CPS produces data on the weekly earnings of wage and salary workers and their families, which BLS publishes on a quarterly basis. In addition, annual earnings and some total income data are published in conjunction with data on the economic status of families and on the employment problems of workers. Because it is a household survey, the CPS is able to provide substantial detail on demographic, social, and economic characteristics of workers and their families.

### BACKGROUND

The forerunner of the CPS was the Monthly Report on Unemployment, initiated by the Works Progress Administration in 1940 in response to the increased need for data on the employment status of the U.S. population. In 1942, when the survey was transferred to the Bureau of the Census, its title was changed to Monthly Report on the Labor Force, and in 1948 it was changed to its present name, CPS, to reflect the expanded role of the survey as a source of key economic and social data. In 1959, responsibility for analyzing and publishing labor force data was transferred to BLS.

The CPS is conducted for the BLS by the Bureau of the Census. It uses a scientifically selected national sample of about 59,500 occupied households chosen from 729 sample areas in 1,973 counties and independent cities, with coverage in all 50 states and the District of Columbia. The survey provides the household employment and unemployment data published each month. Participation in the CPS is not compulsory; survey respondents are assured that all information obtained is completely confidential and is used only for the purpose of statistical analysis.

In addition to the monthly basic questions on labor force status, the CPS questionnaire frequently contains supplemental questions on other subjects. For example, each March,

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<sup>1</sup>U.S. Department of Labor, Bureau of Labor Statistics, *BLS Measures of Compensation*, Bulletin 2239 (Washington, February 1986) 34-47.

information is collected on the previous calendar year's earnings, income from other sources, and work experience.

## USUAL WEEKLY AND HOURLY EARNINGS

Beginning in January of 1979, BLS incorporated some questions on weekly and hourly earnings into the basic monthly CPS questionnaire. Because only one-quarter of the respondents in any one month are asked about their earnings, the resulting data are averaged over a three-month period for publication of the weekly earnings on a quarterly basis. Each month, the following questions are asked about every wage and salary worker in one-quarter of the households in the CPS sample:

- "How many hours per week do you usually work at this job?"
- "Are you paid by the hour on this job?"
- "How much do you earn per hour?"
- "How much do you usually earn per week at this job before deductions? Include any overtime pay, commissions, or tips usually received."

Weekly and hourly earnings data are not obtained for self-employed workers, including those who have incorporated their businesses. In 1984, there were 92.1 million wage and salary workers, excluding the incorporated self-employed, of whom 54.1 million were paid hourly rates.

Coverage of the CPS is nationwide, spanning all occupations and industries and both the private and public sectors. For persons holding more than one job, data refer only to the primary job, the one at which he or she worked the most hours during the reference week for the survey. Instructions for the question on weekly earnings specify that any overtime pay, commissions, or tips usually received be included in the reported amount. The occasional receipt of such earnings is not to be reported. No question elicits information about the value of any payments in kind or fringe benefits. Questions pertain to gross earnings, that is, earnings before any deductions for taxes, insurance, union dues, etc.

The time to which the term *usual* applies is not specified in the survey. Thus, the reference period is determined by the respondent. If the respondent asks the enumerator for a definition of *usual*, the latter is instructed to define the term as the number of hours worked or the earnings received during the majority of weeks over the past four or five months. On the other hand, the term *usual* is not included in the question on hourly earnings, because the purpose of the question is to obtain the current hourly rate.

## ANNUAL EARNINGS

The March supplement to the CPS, developed in 1947, provides information on annual earnings. Earnings data can be linked to the number of weeks worked during the year and

are thus particularly useful as indicators of the labor market situation and long-term earning power of the various population groups. In addition, these data are used to estimate the earnings of the various family members (for example, wives) as a share of total family income.

The earnings questions asked in the March supplement to the CPS refer to the amount of all wages, salaries, and profits or losses from self-employment received during the previous calendar year by workers living in the household at the time of the survey. Earnings are derived from the following three sources:

- Money wages or salaries earned from work performed as an employee—that is, wages, salaries, commissions, tips, piece-rate payments, and cash bonuses (the questions focus on earnings before any deductions for personal income taxes or other reasons).
- Net money income from nonfarm self-employment—that is, gross receipts minus expenses from an individual's own business, professional enterprise, or partnership.
- Net money income from farm self-employment—namely, gross receipts minus expenses from the operation of a farm by an owner, renter, or sharecropper.

The questions used to obtain annual earnings data are:

- "How much did you earn from this employer before deductions during (the year)?" (This question is asked of all wage and salary workers, including the incorporated self-employed, concerning the job held the greatest number of weeks during the year. For most wage and salary workers, a job is defined as all the time worked for the same employer. The exception is work for private households, which is counted as a single job regardless of the number of employers.)
- "What were your net earnings from this business/farm after expenses during the year?" (Asked of the unincorporated self-employed.)
- "Does this amount include all tips, bonuses, overtime pay, or commissions that you may have received?"
- "Did you earn money from any other work you did during (the year)?"
- "How much did you earn from: All other employers? Your own business after expenses? Your own farm after expenses?"

Since 1984, persons in the civilian noninstitutional population whose longest job was in the Armed Forces during the previous year have been included in BLS tabulations on annual earnings. Previously, the tabulations were limited to jobs held as a civilian. Annual earnings questions are part of the larger series of supplemental questions asked in March on money income from sources such as Social Security, railroad retirement, supplemental security income, public assistance or welfare payments, interest, dividends, net rental income,



veterans' payments, unemployment compensation, employee pensions, alimony, and child support. Money income does not include noncash benefits received by persons as part of their income, such as food stamps, subsidized housing, or the value of fringe benefits. Also, while the data refer to income in the previous year, the demographic characteristics of the person obtained at the same time refer to the time of the survey.

## DATA PROCESSING

To develop usable estimates of average earnings for the population as a whole, the sample data collected in the CPS must undergo a series of processing procedures, which are performed for BLS by the Bureau of the Census. Information collected from each interview is first checked to determine if the reported earnings are within a reasonable range and if entries contain all digits. Acceptable ranges for usual weekly earnings are based on both the occupation and the hours usually worked. For full-time workers, the floor is \$20 to \$30 a week (depending on occupation) and the ceiling is \$1,999 (\$999 prior to 1986), the highest value that can be coded onto the questionnaire. For part-time workers, the floor is \$20, and ceilings range from \$749 to \$1,999 (again, depending on occupation). In-range entries for hourly paid workers have a floor of 50 cents and ceilings from \$29.99 to \$99.99. Entries outside the specified range or with missing digits are treated as a nonresponse.

The next processing step is an editing procedure to either calculate missing data or assign a record to be allocated for nonresponse. When editing, missing data are calculated if:

- There is no response to the usual weekly earnings question, but there are entries for usual hours worked and hourly earnings.
- There is no entry to the question on whether the worker is paid an hourly rate, but an hourly rate is entered on the questionnaire.
- The worker is reported to be paid an hourly rate, but no value has been reported.

Out-of-range items and blank items that cannot be filled in during the editing stage are allocated. For a person with no entry for an item, allocation is performed by matching his or her record with that of a person of similar demographic and other characteristics who has an entry for the item in question. The value on the donor record is then inserted onto the record requiring allocation. This procedure has long been used in processing most other data series from the CPS as well as in the processing of the decennial censuses.

The next processing step is the estimation procedure. This procedure weights the data from each sample person to the number of people that person represents in the population. The basic weight is only a rough measure of this representation. Basic weights must be adjusted for noninterviews and to account for the fact that the distribution of the population selected for the sample may differ somewhat (by chance) from that of the population as a whole, by characteristics such as age, race, sex, and residence. The weighting procedure requires that the sum of sample weights agree with independent estimates of the civilian

noninstitutional population by age, race, and sex based on statistics from the decennial census; statistics on births, deaths, immigration, and emigration; and statistics on the strength of the Armed Forces. Because the weekly and hourly earnings data are collected from only one-quarter of the CPS sample households, weights for these items are roughly four times the weight for full-sample items.

## APPLICATION

The CPS earnings data are particularly useful because they can be linked with a variety of demographic and socioeconomic characteristics. Earnings can be cross-tabulated by age, race, and occupation; or the earnings of husbands and wives can be compared by family size and type; etc. While earnings data from the CPS have their limitations, they remain the principal means of providing the Nation with earnings statistics in combination with demographic detail. Data collected from employer records generally do not provide any earnings information for specific population groups and, given the nature of present record keeping systems, the costs and burdens employers would be faced with to collect demographic data make such a possibility quite remote.

## RELIABILITY OF CPS DATA

Research concerning the reliability of data from the CPS reveals two areas of concern: underreporting of income and unreliability of CPS estimates.

As in most household surveys, the estimated total amount of income received by persons derived from the March CPS is somewhat less than estimated amounts derived from independent sources, such as the Bureau of Economic Analysis, the Social Security Administration, and the Veterans Administration. The difference between the survey estimate and the independent estimate is defined as "underreporting of income."<sup>2</sup>

To estimate the magnitude of underreporting in the CPS, estimates of aggregate money income are made from independent sources (for each income source) by adjusting aggregate income figures from these sources to CPS money income concepts (such as adding overtime pay to gross wages). Because of the difficulty in obtaining reliable independent estimates of aggregate income for some individual sources of income collected in the CPS, figures for certain items, such as estates, trusts, and alimony or child support, are not included. Of course, independent estimates are, themselves, subject to errors and conceptual differences for which no adequate adjustment is possible.

Wide variations are found in the amount of underreporting by source of income. Underreporting varies from about 45 percent for interest income to only about 1 percent for wage and salary income. The reasons for underreporting of income are many and varied.

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<sup>2</sup>U.S., Department of Commerce, Bureau of the Census, *Money Income of Households, Families, and Persons in the United States: 1985*, Current Population Reports, Consumer Income, Series P-60, No. 156: 175-176.

Some of the more important reasons include (1) oversight, (2) reluctance to reveal the receipt of certain income types, (3) reporting of rounded amounts, (4) misunderstanding of the questions, (5) lack of information, especially covering family members not present during the interview, (6) interviewer errors in recording information on the questionnaire, (7) biases in the allocation of nonresponses, and (8) errors resulting from the aggregation of the information collected from individual questionnaires.

Table A-1 compares CPS aggregate results in 1983 with those obtained from independent estimates.

**Table A-1. Comparison of 1983 CPS Aggregate Results with Independent Estimates**

Source of Income	CPS as a Percent of Independent Source	Source of Income	CPS as a Percent of Independent Source
Total Income .....	90.1	Dividends .....	45.4
Wages or Salaries .....	99.0	Net Rent and Royalties .....	48.1
Nonfarm Self-employment .....	115.1	Unemployment Compensation .....	75.5
Farm Self-employment .....	121.3	Workers' Compensation .....	47.0
Social Security/Railroad Retirement .....	91.7	Private Pensions and Annuities .....	63.3
Supplemental Security Income .....	84.9	Federal Government and Military Retirement ..	91.2
Aid to Families with Dependent Children .....	76.0	State and Local Government Retirement ....	64.7
Interest .....	45.0	Veterans' Payments .....	63.3

Because the CPS estimates<sup>3</sup> are based on a sample, the reliability of estimates<sup>3</sup> may differ somewhat from the figures that would have been obtained if a complete census had been taken using the same questionnaires, instructions, and enumerators. There are two types of errors possible in an estimate based on a sample survey: sampling and nonsampling. The accuracy of a survey result depends on both types of errors, but the full extent of the nonsampling error is unknown. Consequently, particular care should be exercised in the interpretation of figures based on a relatively small number of cases or on small differences between estimates.

## **NONSAMPLING VARIABILITY**

Nonsampling errors can be attributed to many sources; e.g., inability to obtain information about all cases in the sample, definitional difficulties, differences in the interpretation of questions, inability or unwillingness on the part of the respondents to provide correct information, inability to recall information, errors made in collection such as in recording or coding the data, errors made in processing the data, errors made in estimating values for missing data, and failure to represent all units with the sample (under coverage). Under coverage in the CPS results from missed housing units and missed persons

<sup>3</sup>Ibid., 177-185.

within sample households. Generally, under coverage is larger for males than for females and larger for blacks and other races combined than for whites. In most cases the questionnaire entries for income are based on the memory or knowledge of one person, usually the wife. The memory factor in data derived from field surveys of income probably produces underestimates because the tendency is to forget minor or irregular sources of income.

## **SAMPLING VARIABILITY**

Standard errors are primarily measures of sampling variability, that is, of the variation that occurred by chance because a sample rather than the entire population was surveyed. The sample estimate and its standard error enable one to construct confidence intervals—ranges that would include the average result of all possible samples with a known probability. The average estimate derived from all possible samples may or may not be contained in any particular computed interval.

However, for a particular sample, one can say with a specified confidence that the average estimate derived from all possible samples is included in the confidence interval. Because of the large standard errors involved when the base is less than 75,000, there is little chance that summary measures (such as means, medians and percent distribution) would reveal useful information when computed on a base smaller than 75,000. Also, care must be taken in the interpretation of small differences, as even a small amount of nonsampling error can cause a borderline difference to appear significant or not, thus distorting a seemingly valid hypothesis test.

## **EVALUATION OF CPS**

An independent review of the CPS was conducted by the National Commission on Employment and Unemployment Statistics during their study from April 1978 through June 1979.<sup>4</sup> They compared earnings data compiled from the CPS with earnings data compiled from the Nonagricultural Establishment Survey. They found that, despite conceptual and methodological differences in the CPS and establishment series, levels and trends in average weekly earnings from both series had shown remarkable consistency over time. They found, however, that this did not hold true for estimates of real spendable earnings. In a comparison of real after-tax weekly earnings as reported in the CPS and the Establishment Survey for 1963 through 1977, the commission found that the CPS data consistently exceeded the levels reported in the establishment series. In 1977 for example, CPS data showed earnings more than one-third higher.

Overall, the commission found the CPS to be the "cornerstone of our labor market information system," providing highly reliable estimates. In a 1985 study of establishment

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<sup>4</sup>National Commission on Employment and Unemployment Statistics, *Counting the Labor Force, Labor Day, 1979* (Washington, 1979), 127-152 and 206-208.

survey results versus individual survey results,<sup>5</sup> the accuracy of wage data from survey responses was validated against records from a company. This study found that the annual earnings reported by the individual in the survey did not significantly differ from the average annual earnings revealed by company records.<sup>6</sup> Overall the study found very little evidence of bias in interview reports, especially in reports of prior year's annual earnings,<sup>7</sup> and that errors in measures of changes in annual earnings were surprisingly small.<sup>8</sup>

## EVALUATION OF CPS AS A MEASURE OF WAGE GROWTH

Historically, CPS data have primarily been used as an indicator of unemployment rates and of actual wage levels, rather than being structured as an index of wage growth like the ECI. The ECI is an accepted measure of wage growth for the overall civilian population, but it can only be disaggregated based on occupation or industry. It is, therefore, difficult to weight against the military structure, because the nature of jobs in the military is unlike that in the civilian sector. The CPS data, on the other hand, with their demographic characteristics, are relatively easy to weight against the military population. As RAND used CPS data to develop the DECI, it's important to establish that the CPS data base and the ECI data base measure generally the same income population overall.

Accordingly, we compared unweighted CPS data against the ECI to assist in validating the use of CPS data in this manner. We used the unweighted CPS wage data to develop an index of Current Population Survey Income (CPSI). Figure A-1 reflects the comparison of annual growth between CPSI and the ECI for civilian workers. As can be seen in this figure, the growth rates are remarkably similar. While the CPSI is affected to a greater degree by conditions of employment (such as recessions), it maintains the same growth rate as the ECI over time. Hence, a decision about using CPS data or the ECI for wage adjustment guidance should not rest on their accuracy as wage growth indicators, but rather on whether short-term or long-term stability is more important in fulfilling management policies and objectives.

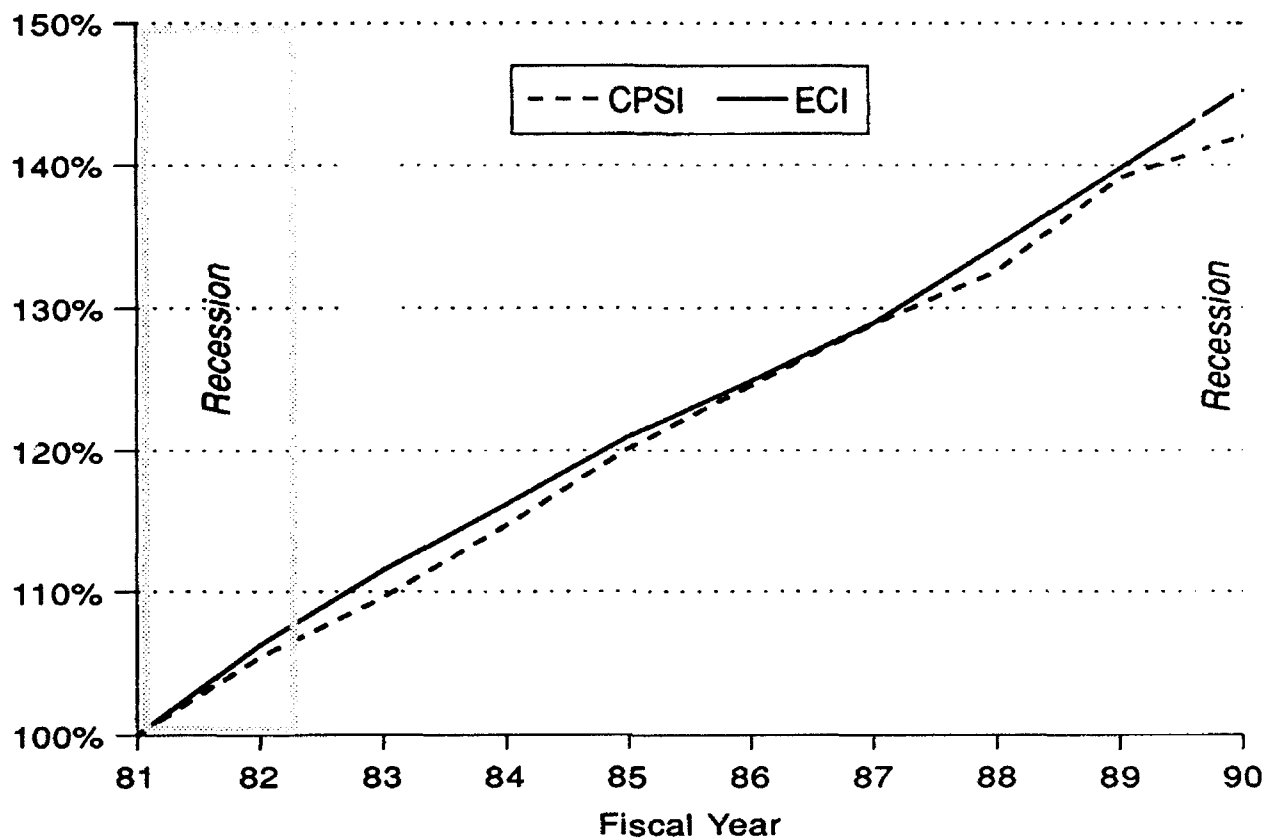
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<sup>5</sup>Greg J. Duncan and Daniel H. Hill, "An Investigation of the Extent and Consequences of Measurement Error in Labor-economic Survey Data," *Journal of Labor Economics*, (October 1985): 508-532.

<sup>6</sup>*Ibid.*, 515.

<sup>7</sup>*Ibid.* 529.

<sup>8</sup>*Ibid.*, 530.



**Figure A-1. Cumulative Growth—CPSI versus ECI.**

## ANNUAL PAY ADJUSTMENT

### APPENDIX B—EVOLUTION OF MILITARY PAY ADJUSTMENTS

#### OVERVIEW

As the composition of our military forces has evolved over the years, so has the military compensation system to keep up with changing expectations and requirements. So that we can better understand the annual pay adjustment process, this appendix briefly describes the evolution of the military compensation system, with an emphasis, especially in the later years, on how pay has been adjusted. Indexes and the relative raises given to federal civil servants and the military played an important role in pay adjustments from 1967 on. As a reference, Table B-1 displays values for the ECI, Consumer Price Index (CPI), PATC, raises given to the various elements of RMC, and the raise given to the GS population, from 1967 through 1991.

#### EARLY DEVELOPMENT OF MODERN SYSTEM—POST-WWI THROUGH WWII

The Joint Service Pay Readjustment Act of June 10, 1922 was the first pay legislation to deal with compensation for all of the armed services. Officers below general or flag rank were entitled to base pay at rates determined by pay periods, plus rental and subsistence allowances. General and flag officers were entitled to base pay based on rank only. Pay periods were determined by a combination of rank and length of service and were established to relieve the adverse financial impact of the promotion slowdowns of the post-World War I period. Under this construct, it was not necessary for an officer to be promoted to advance to the next higher period; conversely, promotion to the next higher rank did not necessarily entail an increase in pay and allowances. Enlisted members were entitled to base pay determined by their rank, and cash allowances if quarters and subsistence were not furnished in kind. Longevity credit was given by permanent additions to base pay for enlisted personnel. Officers were entitled to additive longevity pay equal to 5 percent of their base pay for each three years of service, up to a maximum of 30 years.<sup>1</sup>

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<sup>1</sup>U.S. Department of Defense, Office of the Secretary of Defense, *Military Compensation Background Papers: Compensation Elements and Related Manpower Cost Items—Their Purposes and Legislative Background*, 4th Ed. (Washington, 1991), 25.

**Table B-1. Index Values and Raises**

Fiscal Year	ECI (Mar)	CPI-U (Dec)	PATC	Mil Pay	Basic Pay	BAQ	BAS	GS Pay
1967		3.5	3.3	5.2	5.6	1.2	9.4	4.5
1968		3.0	4.5	5.2	6.9	0	1.3	4.9
1969		4.7	5.4	9.3	12.6	0	0.0	9.1
1970		6.2	5.7	6.6	8.1	0	4.5	6.0
1971		5.6	6.2	6.8	7.9	0	7.9	5.96
1972		3.3	6.6	19.6	18.81	34.5	-3.4	5.5
1973		3.4	5.8	6.0	6.69	0	11.0	5.14
1974		8.7	5.4	7.3	5.16	0	33.0	4.77
1975		12.3	6.4	5.52	5.52	5.52	5.52	5.52
1976		6.9	9.0	5.0	5.0	5.0	5.0	5.0
1977		4.7	7.0	4.83	3.62	10.72	4.83	4.83
1978	6.8	6.7	6.9	7.05	6.2	10.95	7.05	7.05
1979	7.5	9.0	7.9	5.5	5.5	5.5	5.5	5.5
1980	7.8	13.3	7.8	7.02	7.02	7.02	7.02	7.02
1981	9.1	12.5	9.1	12.57	11.7	11.7	21.7	9.12
1982	9.3	8.9	9.7	14.3	14.3	14.3	14.3	4.8
1983	8.1	3.8	9.5	4.0	4.0	4.0	4.0	4.0
1984	5.6	3.8	7.4	4.0	4.0	4.0	4.0	4.0
1985	5.1	3.9	4.7	4.0	4.0	4.0	4.0	3.5
1986	4.4	3.8	4.5	3.0	3.0	3.0	3.0	0
1987	4.2	1.1	4.4	3.0	3.0	3.0	3.0	3.0
1988	3.5	4.4	3.9	2.0	2.0	2.0	2.0	2.0
1989	3.5	4.4	5.2	4.3	4.1	7.0	4.1	4.1
1990	4.4	4.6	5.0	3.6	3.6	3.6	3.6	3.6
1991	4.4	6.1	4.2	4.1	4.1	4.1	4.1	4.1



The Pay Readjustment Act of 1942 (Public Law 77-607, 56 Stat. 359) applied the same method of computing longevity pay used for officers to enlisted personnel.<sup>2</sup>

## FOUNDATIONS OF THE CURRENT SYSTEM—POST-WWII THROUGH VIETNAM

With the end of WWII, the United States took its place as a leading world power. We therefore found it necessary to maintain a large standing military force. In response to this requirement, the Career Compensation Act of 1949 changed the structure of the military compensation system to provide a pay and allowance system that was more equitable to military personnel as well as more responsive to the needs of the United States in terms of attracting and retaining the numbers and types of personnel needed. The restructuring centered on replacing the base pay provisions and pay periods overlay established under the 1922 Pay Act with the system of basic pay and allowances in existence today. The rates of compensation established under the Career Compensation Act of 1949 were set by a comparison of levels of responsibility between military and private sector organizations. For that year, the average total military pay increase was 19.2 percent.<sup>3</sup>

Public Law 85-422, enacted May 20, 1958, increased basic pay rates by an average of 6.4 percent to make them more competitive. Pay grades O-9 and O-10 were added to recognize, for pay purposes, a rank distinction that had long existed in practice. The E-8 and E-9 pay grades were added to encourage enlisted personnel and potential enlistees to strive for career enlisted service. This pay legislation significantly changed the longevity step configuration by eliminating pay increases beyond the point in each pay grade where individuals were normally promoted. This fostered a closer relationship between performance and higher pay. This legislation also established a special category of basic pay for personnel in pay grades O-1 through O-3 who had more than four years of prior active enlisted service. This action served to eliminate any disincentive created by a reduction in basic pay as a result of accepting commissioned service after a long enlisted service.<sup>4</sup>

Between 1958 and 1967, no major changes were made to the basic structure of military compensation. However, periodic increases were made to military pay. In the years 1962 to 1966, military pay increased by an average 2.7, 10.8, 1.9, 8.3, and 2.8 percent, respectively.<sup>5</sup>

In 1953, 1958, 1963, and 1964, enlisted members with less than two years of service were excluded from the basic pay raises. Basic pay raises for officers with less than two years of service were similarly, but less severely, trimmed during these years. Beginning in 1966,

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<sup>2</sup>Ibid.

<sup>3</sup>Ibid., 25-26.

<sup>4</sup>Ibid., 26.

<sup>5</sup>Ibid.

however, both enlisted and officers with less than two years of service began to receive the same basic pay increases as other members. Thus, they were able to maintain their then-existing position relative to the other, previously more favorably treated, members.

Public Law 90-207 established a new mechanism for adjusting basic pay rates. Adopted by Congress in late 1967, this legislation called for comparable increases between civilian and military pay. The increase applied to RMC was to equal that of the Federal civilian GS. The entire military increase had to be applied to basic pay, which at the time made up about 75 percent of RMC. Thus, the increase in basic pay needed to be greater than the increase in civilian salaries to enable the RMC and GS raises to be equivalent. For that year, the average total increase was 5.2 percent. The Postal Revenue and Federal Salary Act of 1967 (Public Law 90-206) increased GS salaries in 1968 and 1969 to close the then-perceived gap between Federal civilian and private sector pays. Together, these two pay Acts ensured an increase in RMC in 1968 and 1969 without further congressional action. The average increase to RMC for those two years was 5.2 and 9.3 percent, respectively.<sup>6</sup>

The Federal Pay Comparability Act of 1970 (Public Law 91-656) required that GS pay rates be measured every year against rates for the same levels of work in private enterprise. Further, this Act required that, as of October 1 of each year, Federal compensation be adjusted by the percentage necessary to maintain comparability between Federal and private enterprise rates. The President could submit an alternate plan by August 31, provided neither house of Congress disapproved. These automatic adjustment provisions, along with Public Law 90-207, resulted in a systematic procedure for increasing basic pay rates that had previously been entirely dependent on congressional discretion. In 1970, the average military pay increase was 6.6 percent.<sup>7</sup>

## SEARCHING FOR AN ADJUSTMENT METHOD IN THE POST-DRAFT ERA

In 1971, the draft was abolished, and the military was converted to an all-volunteer force. This action, which required the military to compete for manpower, was to have a profound effect on many military institutions, not the least of which was the compensation system.

To eliminate the lag created by earlier years of exclusion, and to make military entry pay more competitive in the all-volunteer force environment instituted following the Vietnam Conflict, Public Law 92-129 of September 28, 1971 provided a substantial increase in basic pay for members with less than two years of service. Small increases were also made in some pay grades for personnel with more than two years of service, to prevent the large increase in the under two years-of-service rates from compressing the pay grades.<sup>8</sup>

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<sup>6</sup>Ibid., 27-28.

<sup>7</sup>Ibid., 28.

<sup>8</sup>Ibid., 28-29.

Without the draft, DoD was on equal footing with other claimants for manpower in the national labor market. Therefore, DoD had to offer wages along with other benefits that would appear reasonably competitive both to the prospective enlistee and to the service member contemplating return to the civilian work force. Effective 1 January 1971, an average total increase of 6.8 percent was applied to military pay. Additionally, effective 14 November 1971, military pay was increased an average 14.2 percent.<sup>9</sup> The 1 January 1972 pay raise of 5.4 percent, and the 6.0 percent increase granted on 1 October 1972, were designed to maintain the military's competitive position with the private sector.

The pay raise mechanism established in 1967 that linked military pay raises to federal civilian wage increases was expected to preserve this military pay-private sector relationship, thereby establishing a stable military pay adjustment process. However, since comparability was established in 1972, between 1972 and 1982 this linkage operated as intended only three times—in October 1972, 1973, and 1974. In every other year, an alternative means was used to adjust federal pay. Budgetary constraints and pressure to reduce defense spending were cited most often as the reasons alternative means were used to cap federal pay raises at lower levels.<sup>10</sup>

Public Law 93-419 of September 19, 1974 (codified at 37 U.S.C. §1009) retained the principle of linking military pay raises to civil service increases, but adopted a new distribution mechanism under which the entire increase in military compensation was no longer incorporated solely in basic pay. Instead, pay raises were to be distributed to all three cash elements of RMC—basic pay, BAQ, and BAS—each of which was to be increased by the same percentage as GS salaries.<sup>11</sup>

In FY 1976, the Federal civilian, and thus the military, pay raise was capped at 5 percent.<sup>12</sup>

The DoD Appropriation Authorization Act of 1977 (Public Law 94-361) again changed the method for distributing military pay increases. This Act allowed the President to allocate increases among the three cash elements of RMC on other than an equal percentage basis whenever such action was determined to be in the best interest of the Government. However, the amount allocated to basic pay could not be less than 75 percent of the amount that would have been allocated on an equal percentage basis. The primary purpose of granting this reallocation authority was to enable adjustments to be made to the three cash elements of

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<sup>9</sup>U.S. Department of Defense, *Report of the 1971 Quadrennial Review of Military Compensation* (Washington, 1971), Appendix F.

<sup>10</sup>U.S. Department of Defense, Office of the Secretary of Defense, *Military Pay Adjustment Mechanism—A Joint Service Study*, (Washington, 1982), 2-3 and 2-4.

<sup>11</sup>*Background Papers*, 29.

<sup>12</sup>*Military Pay Adjustment*, 2-5.

RMC so that those allowances would, over time, more nearly cover the costs that they had been intended to defray. This Act also allowed, but did not require, the President to pay partial BAQ to members without dependents who were not entitled to cash BAQ.<sup>13</sup> In FY 1977, 25 percent of the 4.83 percent military pay raise was reallocated to BAQ. Twelve percent of the FY 1978 military pay increase was reallocated to BAQ.<sup>14</sup>

In FY 1979, the military pay raise was capped at 5.5 percent, and again in FY 1980, at 7.02 percent.<sup>15</sup>

By the end of 1980, the many reallocations and caps in an era of high inflation had taken their toll in terms of unsatisfactory recruiting and retention, resulting in reduced readiness across the services. Cumulatively, the failure to maintain comparability placed the growth of military pay 17.6 percent behind the growth of pay of private sector workers (as measured by PATC) by the end of FY 1980.<sup>16</sup>

## MAJOR ADJUSTMENTS AND DETAILED HISTORY THROUGH THE 1980s

We will look at the history of military pay raises in more detail for the years since 1980. A summary of the ECI increase, the raise that was recommended by DoD and the Administration, and the raise finally approved by Congress for these years, is at Table B-2.

Table B-2. Military Pay Raises

Fiscal Year	ECI	DoD	Congress (Actual)
1981	9.1	11.7	11.7
1982	9.3	14.4	14.3
1983	8.1	4.0	4.0
1984	5.6	0.0	4.0
1985	5.1	5.5	4.0
1986	4.4	3.0	3.0
1987	4.2	4.0	3.0
1988	3.5	4.0	2.0
1989	3.5	4.3	4.1
1990	4.4	3.6	3.6
1991	4.4	3.5	4.1

FY 1981—The DoD Authorization Act for 1981 (Public Law 96-342) initiated a series of pay adjustments designed to make up for a compensation system whose structure and level had failed to keep up with what was happening in the national economy. Congress again suspended the GS linkage adjustment mechanism and granted an 11.7 percent increase in the three cash elements of RMC. This change was caused by a general feeling that military pay lagged behind civilian wages and the suspicion that the comparability basis under which GS rates were adjusted may have had limited

<sup>13</sup>Background Papers, 29-30.

<sup>14</sup>Military Pay Adjustment, 2-5.

<sup>15</sup>Ibid.

<sup>16</sup>Ibid. 2-3 and 2-4.

applicability to military pay. Also as a result of this Act, the President was directed to make recommendations to Congress, by April of 1981, on an appropriate mechanism for determining the amount of future increases in military pay.<sup>17</sup> This Act also allowed the President to grant disproportionately higher increases to career members. The President was given authority to reallocate whatever amount of any overall increase that was allocated to basic pay among pay grade and years-of-service categories up to 25 percent of the increase in basic pay that would otherwise have gone to any specific pay grade and years-of-service category. The President was also prohibited from increasing the basic pay of personnel with less than four years of service by a greater percentage than GS rates were increased.<sup>18</sup>

Two other significant structural changes were enacted in conjunction with the 1981 Authorization Act. The Military Personnel and Compensation Amendments of 1980 (Public Law 96-343) added a new save-pay provision to the preexisting basic pay structure. This new provision was added to ensure enlisted personnel appointed as either commissioned or warrant officers and warrant officers appointed as commissioned officers would not suffer a reduction in pay as a result of their new appointments. The Compensation Amendments also provided that, to the extent save-pay provisions were not applicable, basic pay for commissioned officers in pay grades O-1, O-2, and O-3 with more than four years of active service as warrant officers would be computed in the same way as the basic pay of commissioned officers with more than four years of active enlisted service.<sup>19</sup> The Compensation Amendments were also responsible for the addition of a VHA. A member of the uniformed services entitled to BAQ was also entitled to VHA whenever that member was assigned to a Continental United States (CONUS) high housing cost area.<sup>20</sup>

FY 1982—The major adjustments were completed in the Uniformed Services Pay Act of 1981 (Public Law 97-60), which mandated increases in all three cash components of RMC. This action again suspended the pay adjustment mechanism established in 37 U.S.C. §1009 and effectively preempted the President's reallocation authority. Effective October 1, BAQ and BAS were increased by 14.3 percent and basic pay was increased from 10 to 17 percent, depending on pay grade. The intent of Congress was to restore, in current dollars, the relationship of military compensation to private sector pay that existed in 1972, when Congress adopted the all-volunteer force construct.<sup>21</sup>

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<sup>17</sup>Congress, House Report 96-1222, accompanying H.R. 6974 (August 8, 1980), 16 and 17.

<sup>18</sup>*Background Papers*, 31.

<sup>19</sup>*Ibid.*

<sup>20</sup>*Ibid.*, 82.

<sup>21</sup>In House Report 97-109, May 19, 1981 (accompanying H.R. 3380), the House Committee on Armed Services stated, "The increases provided by this bill are designed to restore the overall relationship between uniformed service compensation and pay in the private sector that existed when the Nation elected to man the armed forces

The pay rates established by the 1981 Pay Act were provisional in nature, awaiting the development of a more refined adjustment mechanism "appropriately weighted to reflect the military skill mix."<sup>22</sup> Congress noted that "the Administration [had, under the 1981 Authorization Act, been] directed to provide recommendations by April 1, 1981, concerning the appropriate mechanism for making annual adjustments to military pay . . . [but that] final recommendations have not yet been provided."<sup>23</sup>

FY 1983—No mechanism was ever developed, and on 1 October 1982 an increase of 4.0 percent was provided to members of the uniformed services. The 4.0 percent figure was derived from a 4.0 percent cap placed on the GS pay increase for FY 1983. Congress took no direct action on the pay raise, with implementation effected through the normal process of Executive Order.<sup>24</sup> The Senate did indicate, however, that they

would be very concerned if the Congress failed to provide a fair pay raise to military personnel in fiscal year 1983. Such an action would signal a return to the painful boom and bust cycles from which the services have only recently been recovering. The committee believes that the progress that has been made to restore the comparability and competitiveness of military pay must continue. The military will face enormous challenges in the years ahead as the economy recovers and as the size of the male youth population decreases as a result of changing demographics.<sup>25</sup>

FY 1984—In 1983, Congress recommended that the link between military pay and civil service wages be severed and that an appropriate index for military pay be developed. The primary concern was that the link resulted in inordinately large increases for military personnel. Congress felt that an appropriate index would "provide assurance to the country that military members are receiving no more than what the average private sector worker is receiving in annual pay raises."<sup>26</sup>

The DoD Authorization Act of 1984 (Public Law 98-94) authorized a 4.0 percent increase in the three cash elements of RMC. The 4.0 percent increase applied to all members except

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with volunteers."

<sup>22</sup>Congress, Senate, Committee on Armed Services, Senate Report 97-146 (accompanying S. 1181, 97th Congress, 1st session), 7.

<sup>23</sup>Ibid.

<sup>24</sup>Executive Order 12387, 47 Fed. Reg. 44981 (October 1982).

<sup>25</sup>Congress, Senate, Committee on Armed Services, Senate Report 97-330, 97th Congress, 2nd Session (1982), 127.

<sup>26</sup>Congress, Senate, Committee on Armed Services, Senate Report 98-174, accompanying S.675, 98th Congress, 1st Session, (1983), 215.

enlisted members in pay grade E-1 with less than 4 months of active duty.<sup>27</sup> The President's budget submission had proposed a full-year freeze on military pay, but the Congress felt otherwise, stating that:

The committee recommends denial of the President's proposed full-year freeze on military pay and a reduction of the requested increase in active duty end strength by 39,300. In view of the serious recruiting and retention problems resulting from a series of pay caps during the late 1970's, the committee recommends a 4 percent pay raise for military personnel.<sup>28</sup>

The 1984 DoD Authorization Act also contained an amendment to rectify an incorrect interpretation of Congress's intent in the Military Personnel and Compensation Amendments of 1980. The wording of the 1980 Act had been interpreted to mean that a member must have either four years of prior enlisted service or four years of prior warrant officer service in order to be eligible to use the special computation. Thus, four years of active service as a result of combining enlisted and warrant officer service did not meet the requirements of the law. The 1984 DoD Authorization Act recommended that active service as warrant officer and enlisted member be combined for purposes of establishing eligibility to use the special basic pay.<sup>29</sup>

An additional issue of interest was touched on in the Senate's preliminary version of the Authorization Act—the Senate proposed linking the military pay adjustment directly to the ECI, severing the linkage to the civil service. The proposal didn't, however, contain any authority for the President to submit an alternate pay recommendation, such provisions having been deleted from the original legislative request in reaction to a recent Supreme Court decision. But, the House version of the Act didn't contain any similar proposal for linking the military pay adjustment to the ECI. When the bill went to the conference committee, DoD persuaded the committee members to not adopt the modified Senate bill.<sup>30</sup>

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<sup>27</sup>Executive Order No. 12456, 49 Fed. Reg. 347 (December 30, 1983). See Senate Report No. 98-213 (Committee of Conference) accompanying S. 675, 98th Congress, 1st Session, (1983), 223-224.

<sup>28</sup>Congress, House, Committee on Armed Services, House Report 98-107, accompanying H.R. 2969, 98th Congress, 1st Session, (1983), 9.

<sup>29</sup>Section 902(a) of the 1984 Authorization Act, 97 Stat. at 635; see House Report 98-107 (Committee on Armed Services), accompanying H.R. 2969, 98th Congress, 1st Session, (1983), 209-210; and Senate Report 98-213 (Committee of Conference), accompanying S.675, 98th Congress, 1st Session, (1983), 224.

<sup>30</sup>Congress, Committee of Conference, Senate Report 98-213, accompanying S.675, 98th Congress, 1st Session, (1983), 226.

FY 1985—Office of the Secretary of Defense (OSD) requested a 5.5 percent pay raise effective 1 January 1985.<sup>31</sup> The DoD Authorization Act, 1985 (Public Law 98-525) authorized a 4.0 percent increase in basic pay and BAS. BAQ was restructured. Instead of adjusting BAQ through legislative action or by 37 U.S.C. §1009, Congress adopted new BAQ rates computed on the basis of housing costs actually paid by personnel in different pay grades throughout the United States. The 4.0 percent increase applied to all members except personnel in pay grade E-1 with less than four months of active duty, and became effective January 1, 1985.<sup>32</sup>

FY 1986—OSD proposed a 3.0 percent increase to take effect on 1 July 1985. Citing difficult budgetary constraints, the DoD Authorization Act, 1986 (Public Law 99-145) provided the 3.0 percent increase in the three cash elements of RMC, effective 1 October 1986.<sup>33</sup> The pay adjustment mechanism of 37 U.S.C. §1009 was again bypassed.<sup>34</sup>

FY 1987—OSD recommended a 4.0 percent increase effective 1 October 1986. Congress approved only a 3.0 percent increase, effective 1 January 1987, while noting that:

Military pay levels continue to lag behind comparable civilian wages. As measured by the Employment Cost Index of the Bureau of Labor Statistics, military pay trails civilian wages by 8.3 percent. Without a four percent increase in military pay during fiscal year 1987, it is likely that this gap will grow even larger. The committee believes that, even in light of the severe budget constraints being imposed on defense, it is essential that military pay not be permitted to fall further behind civilian wages.<sup>35</sup>

FY 1988—OSD requested a 4.0 percent raise effective 1 January 1988, and a 4.3 percent raise effective 1 January 1989.<sup>36</sup> Congress approved a 2.0 percent increase effective 1 January 1988.<sup>37</sup> The Senate had recommended approval of the 4.0 percent OSD request for 1 January 1988, but "because of the uncertainties involved in projecting private sector wage growth and other economic factors that bear on pay raise decisions," the Senate recommended deferring

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<sup>31</sup>Congress, House, Committee on Armed Services, House Report 98-691, accompanying H.R.5167, 98th Congress, 2d Session, (1984), 254.

<sup>32</sup>*Background Papers*, 34.

<sup>33</sup>Congress, Senate, Committee on Armed Services, Senate Report 99-41 accompanying S. 1029, 99th Congress, 1st Session, (1985), 190.

<sup>34</sup>*Background Papers*, 35.

<sup>35</sup>Congress, Senate Report 99-331 accompanying S. 2638, 99th Congress 2d Session, (1986), 225.

<sup>36</sup>This was the beginning of biennial budget submissions.

<sup>37</sup>The size was reduced by the "Budget Summit Agreement," the Act of 22 December 1987 (Public Law 100-200 §110(b), 101 Stat. 1329-436 (1987)).



action on a pay raise for 1989.<sup>38</sup> The House did not recommend approval of the 4.0 percent raise "given the climate of fiscal austerity, the committee was unable to grant the Administration's request for a four percent increase," but had recommended a 3.0 percent increase that "is consistent with the raise granted last year and allows pay to keep ahead of inflation."<sup>39</sup>

FY 1989—Once again, OSD requested a 4.3 percent pay raise effective 1 January 1989. Congress approved a 4.1 percent increase, effective 1 January 1989, in basic pay and BAS and a 7.0 percent increase in BAQ. The House had recommended a 4.0 percent increase in basic pay and BAS and a 7.0 percent increase in BAQ.<sup>40</sup> The Senate had recommended approval of the OSD request.<sup>41</sup> However, in committee, the 4.1 percent and 7.0 percent increases were approved. It was noted that the ECI increased only 3.5 percent vice the 4.3 percent OSD projection; and, for the first time since 1981, the military pay raise exceeded the ECI increase.<sup>42</sup>

FY 1990—OSD recommended a 3.6 percent pay raise effective 1 January 1990; Congress approved the request. The Senate noted

that the requested pay raise for military personnel is less than the projected wage growth in the private sector, as measured by the Employment Cost Index (ECI), of 4.3 percent. Using this measure, the gap between military and private sector pay increases has grown from relative comparability in 1981 to 11 percent. This gap is of concern to the committee.<sup>43</sup>

The House "recommends approval of the administration request" and "regrets that fiscal constraints preclude the [sic] payment of a higher pay raise."<sup>44</sup>

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<sup>38</sup>Congress, Senate Report 100-57 accompanying S.1174, 100th Congress, 1st Session, (1987), 144.

<sup>39</sup>Congress, House, Committee on Armed Services, House Report No. 100-58 accompanying H.R. 1748, 100th Congress, 1st Session, (1987), 203.

<sup>40</sup>Congress, House, Committee on Armed Services, House Report No. 100-563 accompanying H.R. 4624, 100th Congress, 2d Session, (1988), 251-252.

<sup>41</sup>Congress, Senate, Committee on Armed Services, Senate Report No. 100-326 accompanying S. 2355, 100th Congress, 2d Session, (1988), 92.

<sup>42</sup>*Background Papers*, 38-39.

<sup>43</sup>Congress, Senate, Committee on Armed Services, Senate Report No. 101-82 accompanying S. 1352, 101st Congress, 1st Session, (1989), 176.

<sup>44</sup>Congress, House, Committee on Armed Services, House Report 101-121 accompanying H.R. 2461, 101st Congress, 1st Session, (1989), 274.

FY 1991—Although, OSD recommended a 3.5 percent increase effective 1 January 1991, Congress approved a 4.1 percent increase. The House Committee on Armed Services stated that it

is determined to maintain a competitive level of compensation in the future and to protect the quality of life for service members and their families. Accordingly, the committee recommends a 4.1 percent increase in basic pay, basic allowance for quarters, and basic allowance for subsistence, effective January 1, 1991. This is a 0.6 increase over the President's budget request of 3.5 percent.<sup>45</sup>

The Senate noted

that the recommended pay raise is less than the expected wage growth in the private sector. However, the committee also notes that the administration recommended the 3.5 percent pay raise in its annual report on the adequacy of pay and allowances of the Armed Forces as "... adequate at this time to support our force objectives going into the early 1990s."<sup>46</sup>

#### THE CURRENT ENVIRONMENT—ENACTMENT OF THE FEPCA

In an effort to ease the large comparability gap between federal civilian workers and the private sector, FEPCA<sup>47</sup> was enacted on 5 November 1990. While not specifically intended to affect the military, several provisions are significant, not the least of which is the preservation of the linkage between military and GS raises. Because the linkage was preserved, military pay raises were included in the automatic adjustment provisions discussed below. Adjustments to military pay do not, however, include the provisions pertaining to locality pay, also discussed below.

The FEPCA provides for annual adjustments to Federal white-collar pay schedules. For FY 1992 and FY 1993, pay rates in the GS will be increased by the full percentage increase in the ECI.<sup>48</sup> Starting in FY 1994, these pay rates will be adjusted by the percentage increase in the ECI minus one-half of one percentage point. After 1994, the President can, in times of national emergency or serious economic conditions, propose an alternative pay adjustment. For FYs 1992-94 the conditions required for a different adjustment are the existence of a state of war or severe economic conditions (defined as a recession).

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<sup>45</sup>Congress, House, Committee on Armed Services, House Report No. 101-665 accompanying H.R. 4739, 101st Congress, 2d Session, (1990), 286.

<sup>46</sup>Congress, Senate, Committee on Armed Services, Senate Report No. 101-384 accompanying S. 2884, 101st Congress, 2d Session, (1990), 171.

<sup>47</sup>Public Law 101-159, Nov. 5, 1990, codified in chapter 53 of title 5, U.S. Code.

<sup>48</sup>The ECI to be used is the ECI for wages and salaries of private industry workers as measured in September. See 5 U.S.C. §5302 and §5303.

Another provision of the FEPCA provides for locality-based comparability payments. Pay disparities greater than 5 percent between GS and non-Federal workers in the same locality will be confirmed and reduced. In a move to accelerate an adjustment for workers in certain areas prior to actual implementation of the locality payment provisions of the FEPCA, Federal workers in three consolidated Metropolitan Statistical Areas—New York, San Francisco, and Los Angeles—began receiving locality payments on 1 January 1991.

## **CONCLUSION**

Over the years, the military compensation system has evolved to support the changing military. Conversion to the all-volunteer force in 1972 generated a requirement to compete in the general labor market, which proved to be very difficult. The military experienced personnel problems in the late 1970s due, at least in part, to a failure of military compensation to keep pace with the civilian wage growth. Political and budget realities have resulted in adjustments that were typically lower than the rate of wage change in the civilian work force as reported by the ECI.

## **ANNUAL PAY ADJUSTMENT**

### **APPENDIX C—CALCULATING THE RAISE FOR EACH ELEMENT OF RMC**

#### **OVERVIEW**

The annual pay raise is aimed at maintaining the competitive level of military pay by keeping it in line with growth of civilian wages. To maintain the structure (relative size of the elements of RMC) of military pay, all rates within any component of military compensation must be increased by the same percentage. Only following structural reviews should the rates within any component of military compensation be adjusted by varying amounts. Except for VHA, which is based on costs in specific localities, the rates of basic pay and BAS are increased for all military personnel by a single percentage. Even the overall average increase in the housing allowance (HA), however, is bounded by a single national rate of increase to insure the housing component of military RMC maintains proper growth.

Maintaining military pay growth equivalent to wage growth in the civilian sector is accomplished by raising RMC by a measure of civilian wage growth, the ECI. As the HA and BAS are increased by their relative increases in cost, the increase applied to basic pay must ensure that the overall pay raise, i.e., the overall average increase in RMC, is equal to the ECI. Hence, in calculating the appropriate raise for basic pay, we need to identify the relative weights of the two allowances as a proportion of RMC, and adjust the remainder, i.e., basic pay, by the amount that causes the total change to equal the ECI. The first question that arises, however, is: What are the relative values of each of the components of RMC?

#### **REGULAR MILITARY COMPENSATION**

The actual value of RMC is different for each service member, as rates of basic pay, BAQ, VHA, and BAS (and the tax advantage associated with the allowances (TAD)) are affected by a variety of circumstances. Hence, the proportionality of RMC is not exactly the same for any two members except by coincidence. Even when the components of RMC are averaged within a single grade, the proportionality between different grades is not the same. However, as indicated above, it is necessary to apply single rates of increase to each of the various components of RMC if the structure is to remain intact. To accomplish this, it is therefore necessary to use average RMC for the entire military when computing the various weights of each of the components of RMC. This then brings us to the next question: What components of RMC should be used in the computation?

The formal definition of RMC includes basic pay, BAQ, BAS, VHA, overseas HA, the value of in-kind items in lieu of allowances, and the TAD. As the ECI measures only wage and salary changes that occur in the United States, the value of overseas HA must be excluded, especially as this component of RMC is affected by factors specific to the foreign location, such as the currency conversion rate. The only other component of RMC that could be considered questionable for inclusion is the tax advantage. However, for the following reasons it must be included:

- The tax advantage has value, directly proportional to the allowances that aren't taxed.
- Whenever the allowances increase, the value of the tax advantage increases.

If the tax advantage were not included in the computation of the pay raise, a significant portion of military pay would be ignored, subjecting our pay adjustment method to serious criticism. Including the tax advantage in the computation, however, doesn't complicate the procedure excessively, because, under current tax laws, the percentage increase in the tax advantage whenever the allowances increase is nearly the same as the percentage increase in the allowances. This occurs because the dollar amounts at which each tax rate level begins are increased each year to account for inflation. Thus, a person's tax liability does not increase when wages do not increase in real dollars. Hence, except on the occasion of major revisions to income tax statutes, it isn't necessary to recompute the value of what the tax advantage will become during the pay raise process, but rather only necessary to add the current value of the tax advantage into the allowance that it applies to in determining the proportionality of the components of RMC.

One final question concerning the components of RMC remaining to be answered is: How should the value of in-kind quarters and subsistence be treated? As previously noted in Chapter 5, we must assume that in-kind quarters and subsistence are equivalent in value to the allowances that would have been received by the member had allowances been paid in lieu of the in-kind items. Hence, when computing the average RMC of the entire military, the average value of each allowance is imputed for all members.

## CALCULATING AVERAGE RMC

The Directorate of Compensation within OSD annually publishes Selected Military Compensation Tables in conjunction with the annual pay adjustment. DoD can use these tables each year during the pay adjustment process to determine the proportional influence of each component of RMC for computing the basic pay raise.

In 1991, average annual RMC, assuming all personnel received full cash allowances, was:

Basic Pay	BAQ+VHA	BAS	TAD	RMC
\$17,539.01	\$5,480.88	\$2,138.07	\$1,478.76	\$26,636.72

To determine the full value of each of the allowances, it is necessary to distribute the tax advantage proportionally between the two allowances. Once this is accomplished, the value of RMC for the pay adjustment process becomes:

Basic Pay	BAQ+VHA+TAD	BAS+TAD	RMC
\$17,539.01	\$6,544.66	\$2,553.05	\$26,636.72

Each component's percentage of RMC can then be determined. For 1991, those percentages were:

Basic Pay	BAQ+VHA+TAD	BAS+TAD	RMC
65.8%	24.6%	9.6%	100%

### COMPUTING THE BASIC PAY RAISE

Now that the proportional influence of each of the components of RMC has been determined, we are ready to compute the basic pay raise. For the purpose of this example, we will use wage and cost indicators from 1991. In September of 1991, the annual increase in the ECI was 3.7 percent. In October of 1991, the annual increase in the CPI (Military Housing Cost Index (MHCI)) was 2.8 percent. In June of 1991, the annual increase in the United States Department of Agriculture (USDA) cost of food was 5.38 percent. Based on these indicators—

- The HA will be increased by 2.8 percent.
- The subsistence allowance will be increased by 5.38 percent.
- Basic pay will be adjusted so that average RMC increases by 3.7 percent.

Using these percentages and each component's percentage of RMC, the basic pay raise to be applied to all service members would be calculated as follows:

$$\frac{\text{ECI} - (\text{HA}\% * \text{CPI(MHCI)}) - (\text{BAS}\% * \text{USDA})}{\text{Basic Pay}\%} = \text{Basic Pay Raise}$$

or

$$\frac{.037 - (.246 * .028) - (.096 * .0538)}{.658} = .038 \text{ or } 3.8\%$$

In this example, the combined value of the increase in the housing and subsistence allowances was less than the ECI. Hence, the basic pay raise calculation resulted in an amount that exceeded the ECI. When the combined value of the increase in housing and subsistence exceeds the ECI, the basic pay raise would be less than the ECI.

## EFFECT ON RMC STRUCTURE

What effect will this use of different percentages for each component of RMC have on the structure of RMC? As previously discussed, if one desires to cause no change to the structure during the annual pay adjustment process, all elements of RMC must be adjusted by a single amount.

The QRMC's recommendation to adjust the housing and subsistence allowances based on cost changes, and overall RMC by wage growth, will drive some change in the structure. However, as shown in Table C-1 (using indexes from 1981 through 1991 to notionally change the 1991 structure of RMC), the change in RMC structure resulting from use of the various indexes would have been minimal.

**Table C-1. Effect of Annual Adjustment on RMC Structure**

Baseline	Basic Pay (%)	Housing (%)	BAS (%)
1991 RMC Structure	65.8	24.6	9.6
1981 indexes	66.0	24.7	9.3
1982 indexes	66.4	24.5	9.1
1983 indexes	66.5	24.5	9.0
1984 indexes	67.0	24.5	8.5
1985 indexes	67.3	24.7	8.0
1986 indexes	67.7	24.5	7.8
1987 indexes	67.8	24.5	7.7
1988 indexes	67.4	24.6	8.0
1989 indexes	67.4	24.6	8.0
1990 indexes	67.1	24.6	8.3
1991 indexes	66.9	24.8	8.3

## ANNUAL PAY ADJUSTMENT

### APPENDIX D—LEGISLATIVE PROPOSALS

Two legislative proposals are associated with this report:

- The interim proposal, intended for use until cost-based allowances are implemented. This change will mandate a full ECI military pay raise, but retain the current method of applying that raise equally to basic pay, BAQ, and BAS. A draft of this proposal starts on the next page.
- The final proposal, to be used when cost-based allowances are implemented. This change will mandate a full ECI military pay raise to overall total RMC and adjust the allowances based on their costs. A draft of this proposal is not included here, as it is contained in the Integration and Transition MTS.



Honorable Thomas S. Foley  
Speaker of the House of Representatives  
Washington, DC 20515

Dear Mr. Speaker:

Enclosed is a draft of legislation "To amend section 1009 of title 37, United States Code, to insure that adjustments to military compensation are made on the same basis as those of federal civilian employees and to preclude creation of nominal allowances upon reallocation." The Seventh Quadrennial Review of Military Compensation (7<sup>th</sup> QRMC), which has been designated the representative of the Department of Defense for this proposal, recommends that the legislation be enacted.

Purpose of the legislation

Unless this legislative proposal is adopted, the 1994 pay adjustment for the uniformed services will be made in accord with 37 USC §1009 and 5 USC §5303, the adjustment provision of the Federal Employees Pay Comparability Act of 1990 (FEPCA). That latter section, implemented in 1994 by §633 of Pub.L. 101-509, will increase pay for General Schedule (GS) employees by the change in the Employment Cost Index (ECI) less 0.5 percent. General Schedule employees, however, will be able to look to 5 USC §5304 to reduce wage disparities that would otherwise arise from the 0.5 percent reduction in ECI. That section, implemented in 1994 by §305 of Pub.L. 101-509, provides for wage-based locality adjustments. Clearly, unless legislative relief is provided, compensation for the uniformed services will steadily, and incrementally, erode.

This legislative proposal addresses the problem by delinking adjustments to uniformed services compensation from the GS and linking them to the change in ECI. Consistent with 7<sup>th</sup> QRMC recommendations, it does not include a provision for partial quarters allowance. It retains from current law provisions authorizing the President to reallocate the annual increase among the elements of compensation (subsistence allowance, housing allowance, and basic pay) or among the cells of the pay table, but expands to both types of reallocation the limitation to 25 percent of the portion otherwise attributable to basic pay. Remaining subsections of the bill are from current law or FEPCA.

Cost and Budget Data

		(In million \$)			
	FY93	FY94	FY95	FY96	FY97
Army	0	50.9	115.0	188.5	266.7
Navy	0	43.9	105.6	171.1	241.4
Air Force	0	44.8	107.3	178.3	248.4
Marine Corps	0	14.2	33.4	52.9	72.2
Total	0	153.8	361.3	590.8	828.7

Sincerely,

Terrence O'Donnell

Enclosures:  
Draft Bill  
Sectional Analysis

A BILL

To amend section 1009 of title 37, United States Code, to insure that adjustments to military compensation are made on the same basis as those of federal civilian employees and to preclude creation of nominal allowances upon reallocation.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

1     **SECTION 1.   SHORT TITLE.**

2             This Act may be cited as the "Military Compensation  
3     Adjustment Act of 1992."

4     **SECTION 2.   ADJUSTMENT MECHANISM FOR MILITARY COMPENSATION.**

5             Section 1009 of title 37, United States Code, is amended to  
6     read as follows:

7     "\$ 1009.   Adjustments of compensation

8             "(a) The President shall, effective January 1 of each  
9     calendar year, make an upward adjustment in the-

10            "(1) monthly basic pay authorized members by section  
11     203(a) of this title;

12            "(2) monthly basic allowance for subsistence authorized  
13     members by section 402 of this title; and

14            "(3) monthly basic allowance for quarters authorized  
15     members by section 403(a) of this title.

16            "(b) Subject to subsections (d), (e), and (f) of this  
17     section, eligible members shall receive an increase in each of  
18     the elements of compensation set forth in subsection (a) of this  
19     section equal to the percentage (rounded to the nearest one-tenth  
20     of one percent) by which the ECI for the base quarter of the year

1 before the preceding calendar year exceeds the ECI for the base  
2 quarter of the second year before the preceding calendar year.

3 "(c) (1) The term 'ECI' means the Employment Cost Index  
4 (wages and salaries of workers in private industry) published  
5 quarterly by the Bureau of Labor Statistics.

6 "(2) The term 'base quarter' means the three month period of  
7 each year ending on September 30.

8 "(d) (1) If, because of national emergency or serious  
9 economic conditions affecting the general welfare, the President  
10 should consider the pay adjustment which would otherwise be  
11 required by subsection (b) of this section to be inappropriate,  
12 the President shall-

13 "(A) prepare and transmit to Congress before September  
14 1 of the preceding calendar year a plan for such alternative  
15 pay adjustment as he considers appropriate together with the  
16 reasons therefore; and

17 "(B) adjust the elements of compensation in accord with  
18 such plan effective the next January 1.

19 "(2) In evaluating economic conditions affecting the general  
20 welfare, the President shall consider pertinent economic measures  
21 including the Indexes of Leading Economic Indicators, the Gross  
22 National Product, the unemployment rate, the budget deficit, the  
23 Consumer Price Index, the Producer Price Index, the Employment  
24 Cost Index, the Defense Employment Cost Index, and the Implicit  
25 Price Deflator for Personal Consumption Expenditures.

1       "(3) The President shall include, in his report to Congress  
2 under paragraph (1) (A) of this subsection, his assessment of the  
3 impact that the alternative pay adjustment under this subsection  
4 will have on the ability of the uniformed services to recruit and  
5 retain quality personnel.

6       "(e) Subject to subsection (g) of this section, whenever the  
7 President determines such action to be in the best interest of  
8 the government, he is authorized to reallocate the overall  
9 average percentage increase described in subsection (b) of this  
10 section among the elements of compensation specified in  
11 subsection (a) of this section.

12       "(f) (1) Subject to paragraph (2) of this subsection and  
13 subsection (g) of this section, whenever the President determines  
14 such action to be in the best interest of the government, he may  
15 reallocate the overall percentage increase in the element of  
16 basic pay that would otherwise be effective, after any relocation  
17 made under subsection (e) of this section, among such pay grade  
18 and years-of-service categories as he considers appropriate.

19       "(2) In making any reallocation under paragraph (1) of this  
20 subsection, the overall percentage increase in the elements of  
21 compensation specified in subsection (a) of this section, in the  
22 case of any member with four years or less of service, may not  
23 exceed the ECI.

24       "(g) The amount of the increase in basic pay for any member  
25 after any reallocation made under subsections (e) or (f) of this  
26 section may not be less than 75 percent of the amount of the

1     increase in basic pay that would otherwise have been effective  
2     under subsection (b) of this section.

3             "(h) Whenever the President plans to exercise his authority  
4     under subsection (e) or (f) of this section to reallocate the  
5     increase in compensation of members, he shall so advise Congress  
6     at the earliest practicable time prior to the effective date of  
7     such increase.

8             "(i) The allocation of increases made under this section  
9     shall be assessed in conjunction with the quadrennial review of  
10    military compensation required by section 1008(b) of this title  
11    and a report shall be made to the Congress summarizing the  
12    objectives and results of that assessment.

13            "(j) An adjustment made under this section, whether by  
14    executive order or other proclamation, shall have the force and  
15    effect of law.

16            "(k) Basic pay may not be paid, by reason of any provision  
17    of this section, at a rate in excess of the rate of basic pay for  
18    level V of the Executive Schedule."

## SECTION-BY-SECTION ANALYSIS

### MILITARY COMPENSATION ADJUSTMENT ACT OF 1992

Section 1 cites this act as the "Military Compensation Adjustment Act of 1992."

Section 2 is a rewrite of 37 USC §1009.

Subsection (a) of the bill requires the President to adjust the elements of uniformed services compensation on January 1 of each year. Current law links the timing of adjustments to the General Schedule.

Subsection (b) of the bill links the percentage by which the elements of uniformed services compensation are adjusted to the difference between the Employment Cost Index (ECI) at the end of the base quarter 15 months earlier and the end of the base quarter 27 months earlier. (For example, the adjustment for January 1, 1993, would be ECI on September 30, 1991, minus ECI on September 30, 1990, expressed as a percentage of ECI on September 30, 1990.) Current law links the percentage of adjustment to the average percentage adjustment to General Schedule basic pay.

Subsection (c) of the bill defines the terms "ECI" and "base quarter" as those terms are defined in the Federal Employees Pay Comparability Act of 1990 (FEPCA), now 5 USC §5302(2) and (3), respectively. There is no commensurate section in the current law.

Subsection (d) of the bill establishes conditions under which the President may use an alternate pay adjustment plan. The procedure is the same as that provided in FEPCA at 5 USC §5303(b).

Subsection (e) of the bill allows the President to reallocate the adjustment among the various elements of compensation. The President now has that authority under subsection (c)(1) of the current law. The bill does not, however, provide for partial allowances (which are allowances in name only) as current law does in subsection (c)(2).

Subsection (f) of the bill allows the President to reallocate the adjustment among the various cells (pay grades and years of service) of the uniformed services pay table. There is a limitation on the exercise of that reallocation authority in the case of members with four years or less service. Current law contains similar provisions in subsections (d)(1) and (d)(2)(B).

Subsection (g) of the bill limits the authority of the President to reallocate, under subsections (e) or (f), more than

25 percent of the adjustment that would otherwise have been made to basic pay. There is a similar limitation under subsection (d)(2)(A) of the current law. It only applies, however, to reallocation among cells of the pay table; it does not apply to reallocation among the elements of compensation.

Subsection (h) of the bill requires the President to notify Congress of his intent to reallocate the adjustment under subsections (e) or (f). That requirement exists in the current law under subsection (e).

Subsection (i) of the bill requires adjustments made under \$1009 to be assessed by the next review of military compensation conducted in accord with 37 USC \$1008(b). The same provision is found in subsection (f) of the current law.

Subsection (j) of the bill provides that adjustments made in accord with \$1009 have the force and effect of law. The same provision is found in subsection (b) of the current law.

Subsection (k) of the bill limits the basic pay of any member to level V of the Executive Schedule. That same limitation exists in FEPCA at 5 USC \$5303(f).